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CENTRAL AMERICAN
AND WEST INDIAN
ARCHÆOLOGY



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POTTERY FIGURE FROM PANAMA;
TALAMANCAN. (SCALE $\frac{2}{3}$)

(Museum of Archaeology, Cambridge)

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CENTRAL AMERICAN AND WEST INDIAN ARCHÆOLOGY

BEING AN INTRODUCTION TO THE
ARCHÆOLOGY OF THE STATES
OF NICARAGUA, COSTA RICA,
PANAMA AND THE WEST INDIES
BY THOMAS A. JOYCE, M.A., WITH
MANY ILLUSTRATIONS & TWO MAPS



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PREFACE

THIS book deals with the archaeology of the Central States of America, south of Honduras, and of the West Indies, in a manner similar to that in which two former volumes have discussed the archaeology respectively of South America and of Mexico and the Maya districts.

It was already approaching completion when the war broke upon Europe, and, though it was finished by the end of the year, circumstances combined to prevent its publication for the time.

Having been engaged for the better part of the last year in work more germane to the present crisis than archaeological studies, I have not found the task of proof-correction very easy, especially as the time which I have been able to devote to it has been extremely limited. For any faults proceeding from these disadvantages I must therefore beg the indulgence of the reader.

The geographical area covered by the book is one which is still very imperfectly known from an archaeological point of view; the people inhabiting it in early times were not so highly developed, politically, as the Mexicans or the Peruvians, and the literature dealing with them is neither large nor easy of access. Still a summary of the known facts may be of use, if only in performing the function of a signpost for future investigators.

I owe much to the many kind friends who have helped me in every direction, and I trust that they will

accept this expression of my grateful thanks. Professor G. G. MacCurdy of Yale University, Dr. C. V. Hartman of the Royal Ethnographical Museum, Stockholm, and Dr. J. W. Fewkes of the Bureau of American Ethnology have permitted me to copy illustrations which have appeared in their works. Professor W. H. Holmes, Director of the above-mentioned Bureau, has extended to me a similar courtesy, and has also furnished me with photographs and a drawing of objects preserved in the National Museum, Washington. To Miss Adela Breton I am indebted for permission to reproduce her drawing which appears as Plate V; to Mr. George G. Heye of New York for like permission with regard to the fine stone "collar" in his collection, shown on Plate XIX; and to the Rev. T. Huckerby for the interesting photographs appearing as Plate XXVIII. To Baron Anatole von Hügel of the Museum of Archæology, Cambridge, I owe permission to make use of the interesting pottery figure which forms an item of the collection over which he presides, and of which Mr. C. J. Prætorius has made so excellent a drawing for the frontispiece. I must thank Sir Hercules Read of the British Museum for much kind advice, and for the line-drawing which adorns the cover. Also Dr. E. A. Wallis Budge for the interest he has taken in the book, which is primarily due to his instigation. The Trustees of the British Museum have been kind enough to allow me to reproduce many of the objects preserved in the national collection; and the Council of the Royal Anthropological Institute has permitted me to make use of the illustrations Plate V and Figs. 46 and 47.

To my wife my thanks are due for her assistance in preparing certain of the line-drawings and in the necessary and laborious task of compiling the index.

Finally I wish to express my gratitude to my publishers for the kind consideration they have consistently shown me, through which the labour involved in the preparation of a general work, such as this, has been appreciably lightened.

T. A. JOYCE.

LONDON, *January*, 1916.

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Central American Archaeology

PART I

SOUTHERN CENTRAL AMERICA

INTRODUCTION

THE subject of this book is twofold ; the first section deals with the life and customs of the inhabitants of the modern countries of Nicaragua, Costa Rica and Panama, as they were before they came in contact with the white man, and with the archaeological remains which are found throughout their territory ; the second treats in a similar fashion of the ethnology and archaeology of the West Indian Islands.

From a strictly historical point of view, the order of precedence might be inverted, since the Islands were discovered by Columbus on his first voyage, while he did not touch at the Isthmus until his fourth journey. As a matter of convenience, however, the order adopted is the better, for the following reason. In two former volumes I have dealt first with the archaeology of the Mexican and Mayan peoples to the north of the region now to be considered,¹ and second with that of the inhabitants of the Southern Continent.² Just as this volume forms a connecting link between the other two, so we shall find that, as we pass down the Isthmus from north to south, there is a regular transition from the

¹ *Mexican Archaeology.*

² *South American Archaeology.*

culture of Mexico and Guatemala to that of Colombia and Peru. The southward pressure of the Nahuatl tribes, which I have described in the first of the two above-mentioned volumes, affected Nicaragua deeply, Costa Rica slightly, and its influence can be traced even in Panama, as far south as the Chiriqui Lagoon. Southern influence appears to have been for the most part recessive rather than progressive. That is to say the general ethnography of Panama and Costa Rica seems to have been originally of a character more nearly related to that of South America than to that of Mexico and Guatemala, but we can recognize no active influence exerted upon the tribes of this region by those of Colombia and Venezuela except in eastern Panama.

In the West Indies the case is different. Here there is practically no trace whatever of contact with Mexico or Central America, but, on the other hand, very definite evidence of two successive waves of immigration from South America. The first of these waves gave the islands a population of South Americans belonging to a widely extended people known as Arawak, while the second colonized the Lesser Antilles with immigrants of an even more widespread stock, the Carib. Wherever found, these two peoples, Arawak and Carib, are mutually antagonistic, and, at the time of the discovery, the only Arawak remaining in the Lesser Antilles were women who had been enslaved by the later comers.

Thus in the first section we commence with a region where Mexican influence is strong, and pass gradually to districts where South American ethnography is paramount. In the second we examine an area which is indirectly related to the southern and eastern portions of the Isthmus, in so far as a common South American element is present in the ethnography of both. At the same time, owing to insular life, the original culture of the Arawak and Carib had become rather specialized.

This is in particular true of the Arawak, who had evidently been settled in the islands for a considerable period before the arrival of their hereditary foes.

First as regards Nicaragua and the Isthmian region. The physical geography consists in the main of a mountainous "back-bone," often, in the more northerly portion, enclosing table-lands, and fringed on either side by a strip of coast, that on the Pacific side being the narrower until Panama is reached, where the conditions are reversed. There appears to be a tendency for the land to rise upon the Pacific slope, and to sink on the Atlantic side, and there is evidence that much ground has been lost to the ocean on the east. At the same time the elevation of the Isthmus is comparatively recent, to speak in terms of geological time, and the mountains at one period probably formed a chain of islands similar to the Antilles. The line of the Rio San Juan, which flows from Lake Nicaragua to the Atlantic, is usually taken as the physical boundary between North and South America, though not on very good grounds. Southern influences certainly reach further to the north, while the flora characteristic of the north persists locally as far south as Costa Rica. In fact no line can be drawn across the Isthmus to mark any definite contrast existing on either side of it; the contrast which does exist lies between the two coasts, Atlantic and Pacific. The cause of this is the central mountain range, which robs the moist easterly winds of a great part of their humidity, so that, whereas the rainfall on the Atlantic slope is both constant and excessive, the Pacific slope has a definite dry and rainy season. The dryest and healthiest regions are those sheltered by high ranges from both Oceans. The difference between the two coasts is of course reflected in the vegetation, the character of which is, moreover, dependent upon elevation. The Atlantic watershed, to speak in general terms, is for the most part covered

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with dense forest, enclosing small settlements on the rivers, and traversed by narrow footpaths along which passes a restricted trade parallel with the coast and inland over the mountains. In fact as means of communication the streams are almost more important than the forest tracks. On the Pacific slope are found woods, park-land, bush-steppes, and savannahs, while thick forest is confined to the beds of streams.

In Nicaragua there are three more or less definite zones of country, consisting firstly of the coast between the highlands and the Pacific, which is mainly of igneous formation, secondly of the uplands of the interior, and thirdly of the Mosquito coast, which is partly coralline and partly alluvial. The last-named is an exception to the statement made above concerning the Atlantic coast, since it appears to be gaining on the sea. A feature of Nicaraguan geography is the lacustrine system in the west, extending for 300 miles, and consisting of the two lakes Managua and Nicaragua, which are not more than 140 feet above the sea-level. These lakes at one time formed arms of the Pacific, and marine forms are still found in them, but at the present time Lake Nicaragua drains into the Atlantic, like most of the Nicaraguan region.

The lakes contain several islands of volcanic origin, the most important being that formed of the twin cones of Ometepe and Madera, the former rising 5000 feet above the level of Lake Nicaragua. The uplands of this country enjoy a relatively mild climate, but the others are tropical. Each zone is distinguished by different vegetation, the most important of the flora being pitch-pine, mahogany and rubber. In the east the fauna include beasts of prey such as the jaguar, puma and ocelot.

In Costa Rica the main range turns rather more to the south and branches so as to enclose the elevated table-lands of San José and Cartago, forming a rugged

central region 3000 to 4000 feet high. The volcanic character of the high country is maintained, and indeed extends into Panama. On either side of the uplands we have the two coastal regions, the Atlantic forests and the Pacific savannahs.

In Panama the same main characteristics persist, especially as regards the difference between the two coasts, though the lower latitude brings with it a greater exuberance of vegetation, especially as the South American continent is approached.

With these few words of introduction we may now proceed to consider the life and customs of the natives such as they were when Columbus first coasted down the Mosquito shore and Vasco Nuñez de Balboa first descried the waters of the Pacific "on a peak in Darien."

CHAPTER I

NICARAGUA AND N.E. COSTA RICA

THE first group of tribes which falls under consideration is that which composed the population of what is practically the modern state of Nicaragua, together with the peninsula of Nicoya, and the coast opposite, now belonging to Costa Rica. Of this area, the comparatively small portion which drains into the Pacific Ocean is by far the more important culturally, and more extensively explored than the rest; the archaeology of the interior and of the eastern side is still very imperfectly known, while the literature dealing with its inhabitants is very scanty and defective.

Even in the west a great deal remains to be done in the way of excavation and classification of remains; in fact at present, owing to the gaps in our archaeological knowledge of the whole area, the only satisfactory method of grouping the various tribes composing the population is provided by the study of their languages, which has advanced further than that of their early culture. The following classification therefore is based upon the researches of philologists, but it corresponds very conveniently with the cultural evidence provided by early chroniclers and later archaeologists.¹

The two most important peoples on the west were the Chorotega and the Nicarao or Niquiran. Of these the former, at the time of the Conquest, inhabited the western region from the Bay of Fonseca to the southernmost point of the Nicoyan peninsula, as well as a narrow

¹ See the Appendix to this chapter, p. 28, and Map 1, p. 30.

strip of the Costa Rican coast opposite the latter, with the exception of a small region around Leon, and a piece of territory between Lake Nicaragua and the sea. They were thus broken into four sections, known as Mangue to the north of the Plain of Leon, Dirian to the south of the latter, Nicoyan on the peninsula of that name, and Orotiñan on the opposite coast. A small isolated branch of this Chorotegan tongue is found as far north as Chiapas, representing probably an early extension of this people in that direction, afterwards cut off and isolated by the numerous tribal movements which have made the reconstruction of ancient American culture a matter of such difficulty.

The first break in the line of Chorotega, proceeding from north to south, occurs, as said above, in the region of the Plain of Leon. Here the Subtiaba tongue was current, a dialect which it has been impossible as yet to relate to any other. The second break, to the west of Lake Nicaragua, brings us in contact with an immigrant body of that stock which played so important a part in Mexico during the years immediately preceding the discovery. Here lived the Nicarao or Niquiran, speaking a Nahuatl language which to all intents and purposes was identical with that of the Aztec. Nor was this point the furthest south of that indefatigable stock of wanderers; enclaves of them were present in Bugaces, Nicoya, and even in the Telorio Valley at the western end of the Chiriqui Lagoon, where a colony was discovered by Juan Vasquez de Coronado in 1564.

The Nicarao preserved the tradition of their immigration, stating that they came from the west (i.e. north-west) from a country called Ticomega Emagua-tega; Torquemada alleges that previous to their arrival they lived in Soconusco, and it may be concluded that they were an early wave of that great tribal movement from north to south which broke up the "Toltec" power in the Mexican Valley, and of which

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the Aztec were the rearguard. With them they brought the typical Mexican calendar and religion, together with the practice of human sacrifice by tearing out the heart of the victim. This would bring them to their new home by Lake Nicaragua somewhere in the eleventh century A.D.¹ At the time of the Conquest, the Nicarao domain extended to the islands in the lake, but there is archaeological evidence to show that these islands had previously been inhabited by Chorotega.

South of Lake Nicaragua, between the Nicoyan peninsula and the river San Juan, were the Corobici, a people about whom practically nothing is known, but who had attained a considerably higher culture than might be expected from the present condition of their descendants, the wild and primitive Guatuso. North of the San Juan, as far as a line drawn, approximately, from Monkey Point westwards to the lake, were the (linguistically) kindred Rama, also a tribe of primitive habits.

The inhabitants of the rest of Nicaragua, by far the larger portion geographically speaking, though never so thickly populated, may be grouped under the term Sumo-Mosquito. These speakers of related dialects may further be divided into four; the Matagalpa to the west of the Mangue and Dirian, the Sumo their eastern neighbours, the Ulua between the last and the Rama, and the Mosquito fringing the eastern coast from Cape Gracias a Dios to Monkey Point.

As remarked above, little is known of the tribes of this area from any source, though an interesting migration story has been preserved concerning the Mosquito. According to this legend the Mosquito were originally called Kiribi and inhabited the department of Rivas, later occupied by the Nicarao. Late in the tenth century they were invaded by a tribe of immigrants from the north, and eventually, after a long

¹ The question of the migrations of the Aztec and kindred tribes, and their date, is discussed in full in my *Mexican Archaeology*.

struggle, were compelled to leave their old home, which was occupied by their supplanters, no doubt the Nicaraos. They retreated to the other side of the lake, the present department of Chontales, where they resided for more than a century. Later, still under pressure, this time probably exercised by the Sumos, they migrated to the coast. Their leader was a man named Wakna, whose son, Lokia Tara, became their ruler, and conquered the whole coast from Honduras to Costa Rica. The tradition is interesting, and supported to some extent by archaeology, since certain objects discovered in Chontales (notably stone axes of the type figured on Pl. I, Fig. 1) have their parallels in the Mosquito region, while the name Kiribi suggests a connection with the Corobici. A further tradition relates that about the twelfth century a cannibal people, called Vivises, of unknown origin, settled on the coast, and to them are attributed certain *tumuli*. The visitors eventually departed, but no man knows whither. As far as history is concerned, the Mosquitos have shown a tendency to expand towards the interior, subduing several Sumo and Rama tribes, the former until recently paying a tribute in the shape of cedar dug-out canoes.

The connection of the Mosquito with the Sumo, however, apart from linguistic evidence, is enforced by a tradition current among the latter people. They trace their origin to a certain rock situated west of the Caratasca (Cartago) lagoon, between the Patook and Coco (Wanks) rivers. This rock is said to bear the mark of an umbilical cord, and here the tribal ancestors were born, a "Great Father," Maisa Kana, and a "Great Mother," Ituana. The latter is identified with the "Mother Scorpion," Itoki, of the Mosquito. The Sumo and Mosquito were descended from these primal ancestors, who cared for their children and gave instruction to them. But the Mosquitos were disobedient, and ran away to the coast. After this, other

tribes, the Tuacha and Yusco, were born, of which the latter turned to evil ways and were conquered by the Sumo; they now live around the headwaters of the Coco. Finally were born the Ulua, who so profited by the instruction of the tribal ancestors that they became especially skilled in medicine and song, and won the name of Boa, "Singers." Meanwhile the Sumo lived on the rivers and in the bush; they were wild and unkempt, their hair fell to their knees, and they were full of lice. Finally the ruler of the Mosquito sent and captured them, had them washed and altogether regenerated them, so that he won their love and obtained their support. Apart from the interest of this legend it possesses also the advantage of having no moral.

As regards the more civilized peoples of this area, the Chorotega had been deeply influenced by the Nicarao. In fact Oviedo states that the religion of the two was identical, and, as will be seen, the religion which he describes is in essentials that of Mexico. It would be unreasonable to suppose that the influence had not extended further, and indeed it is not easy to make a sharp distinction between the customs of the two peoples. The difficulty is increased by the fact that Oviedo, our principal informant, is often very vague himself as regards which of the two he is discussing. Two forms of government prevailed in the west; the inhabitants were divided into communities, some of which were under absolute chiefs termed by the early chroniclers *Caciques* a title which they had found current in the Antilles, while others lived under a republican form of government. From what we know of the primitive Nahuatl tribes, it is reasonable to conjecture that the latter form of constitution was on the whole characteristic of the Nicarao. At the same time, just as among the Aztec, the change from a wandering to a settled life led to the supersession of the old tribal council by a single ruler. Under the older constitution,

to speak generally, the council in cases of emergency would appoint a chief executive officer, whose power lasted for a definite period or as long as the particular emergency endured. There were special reasons why in Mexico a post of this nature tended to crystallize into a permanency, but apart from this the tendency is in itself natural. At any rate we know for certain that at Nicaragua (Rivas), in the heart of the Nicarao domain, there was a Cacique of that name. In the Chorotegan region we know the names of more. Where the council alone was supreme, and I am inclined to believe that this relates chiefly, if not entirely, to the Nicarao, the members were elective, holding office for four moons, and probably representing the families or clans composing the community. The latter supposition is supported by the statement that they "possessed" villages and vassals, which probably means that they were supported by the clan which they represented. The councillors were called *Huebue* (a Mexican word meaning "Elders"), and appointed various executive officers, two of whom in rotation exercised a continual supervision of the market (similar officials existed in Mexico), while others were charged with some special duty demanded by immediate circumstances, such as the preparations for a warlike expedition, or the levy of a tax. The council was jealous of its authority, and would put to death an official who was suspected to be aiming at supreme power, and this fate occasionally befell those appointed to military commands. The council too was the guardian of the registers of property, which were similar to those of the Mexicans, and this fact again suggests that such a constitution was proper to the Nicarao, since no other people possessed a form of writing.¹ Some of the

¹ Strangely enough Herrera states that the Chorotega alone had manuscripts, but it is evident that he has confused the two peoples. Unfortunately no examples of Nicaraguan writing have survived.

Caciques, especially those of the Chorotega, such as Agateite and Nicoya, seem to have exercised a more or less absolute power, the extent of which no doubt depended upon individual character. A chief of this kind was supported by a council formed by the heads of clans, who were called *Galpones*; the offices both of Cacique and Galpones were probably hereditary, though in some cases the system of an elective council seems to have existed parallel with that of a supreme chief. Such an organization probably represents a compromise between the Chorotegan and Niquiran forms of government. An officer appointed by a Cacique for a particular duty, or one of his messengers, carried in token of his office a fly-switch, or in some places a rattle-staff, which he returned to his master when his task was performed; but in general the authority of a chief extended only to public matters, no personal service was owed him, and for such purposes he employed his private staff of slaves.

The legend collected among the Mosquito and related above bears witness to the former existence of a chieftainship among that people. But it seems to have arisen from the fact that the leader in the tribal movement retained his power after the migration was concluded and transferred it to his son. At any rate the office was not long-lived. Even before the death of Wakna, so we are told, dissensions arose, which became aggravated in the "reign" of Lokia Tara. After him the office probably disappeared, and at a later date (1699) we are told that the Mosquito have no actual chief, but only temporary leaders in war. This statement is no doubt true in the sense that there was no great chief exercising power over a wide extent of country, but from other accounts it may be concluded that there were local chieftains who presided over small groups of the population. At any rate, in the time of Columbus, the country north of the San Juan river is

described as being in the hands of a number of rulers. In some places these "kings" bore the title of *Cacique*, elsewhere of *Quebi* or *Tiba*, while "valiant men" were called *Cupra*, and commoners *Chivi*.

Of the customary laws by which these tribes were governed, practically nothing is known save of the Nicarao, whose code was built up on lines similar to that of the Mexicans. Murder was punished with death, while involuntary homicide involved payment of heavy compensation, consisting of a slave or a quantity of cotton textiles. As in Mexico, the shearing of the culprit's hair was regarded as a severe punishment; this treatment was usually accorded to thieves, and the criminal became the slave of the victim until such time as he made restitution, and if restitution was long delayed, he ran the risk of being sacrificed. In matrimonial cases, the male culprit received a severe beating, while the woman was divorced by her husband and might not re-marry; the children remained with the husband. Divorce brought with it deep disgrace, not only upon the woman, but upon her parents also. For rape, the offender was enslaved, unless he paid the marriage-price for his victim, while if a slave tampered with the virtue of his master's daughter, both were buried alive. Slavery of a modified sort existed, as in Mexico, in so far that people in dire poverty might pawn their children, or themselves, such pawns being redeemable at any time on repayment of the goods provided.

As regards marriage, Oviedo states that only one legitimate wife was permitted to any except Caciques. Bigamy was punished by banishment and confiscation of property, the latter being given to the injured partner, who might re-marry. The same author states that marriage was prohibited only within the first degree of relationship. The union was arranged between the fathers of the parties, who presented the

couple with a "dowry," consisting of fruit-trees and other property; turkeys and dogs were killed and cacao provided for a feast, after which the priest took the bride and bridegroom by the little fingers of their left hands and conducted them to a small hut in which a fire was burning. There after a short homily he left them, and when the fire burnt out the marriage might be consummated. If the bride were found to be no virgin she might be repudiated. Should the couple die without issue the landed property given them at their marriage lapsed to their respective families. This regulation implies that the land was divided among the various clans, the portion allotted to each clan being subdivided among its members according to their respective needs. This system was practised in Mexico.

Property other than land was inherited by the sons of the legitimate wife, who were born in the house. The latter privilege was not allowed to the children of concubines, who were forced to go elsewhere when their time approached, nor could the former claim any share in their father's possessions. In cases where a man died without children, his personal property was buried with him.

The social system among the Chorotega is obscure. In some respects women took a higher place among them than among the Nicaraos. The Nicaraos women, so we are told, were submissive, but the Chorotegan wives kept their husbands in good order, and it was not an unheard-of thing for a man to be turned out of doors by his angry spouse and be forced to beg his neighbours to intercede on his behalf. It was considered the husband's duty, moreover, to sweep the hut and light the fire before leaving in the morning to hunt or cultivate. To the Chorotega rather than the Nicaraos must be attributed the custom mentioned, by Oviedo, that in cases of poverty a girl would collect

her "dowry" by means of prostitution; when sufficient property had been amassed by this means, a house was built by her lovers in which a feast was held. At the end of the proceedings the girl selected one of the number as her husband, and, adds the author, it was not uncommon for one or more of the rejected to commit suicide by hanging. The same authority states that in the case of a normal marriage the chief priest possessed a right over the bride which he might exercise on the night preceding the ceremony.

As regards the Mosquito, the author who wrote under the initials M.W. in 1699 states that a system of trial marriage existed among them. The probationary period lasted about two years, at the end of which the "husband" gave the woman's father a present, and the two prepared a feast, after which the union was considered legitimate. A plurality of wives was allowed, but was not common. In later times the custom seems to have been for a young man to select a girl under marriageable age and take up his abode with her family, assisting in all their daily work. When she arrived at puberty he would take her as wife without further ceremony. This may be a modification of the former practice, or the early author may have mistaken the actual facts. At any rate the system was not a bad one, since the two grew to know each other thoroughly, and it is stated that matrimonial squabbles were rare among this people. In some cases, however, a couple would simply set up house together. The Mosquito women seem to have been true companions to their husbands, sharing in their work in the plantations and paddling with them in their canoes; in fact, the only sphere in which they did not assist was that of war.

Among the Nicaraos, war was not quite of the same ceremonial character as among the Mexicans, but still the ceremonial side was not entirely lacking, in so far

as the capture of prisoners for sacrifice was a very important item, though territorial disputes provided the chief cause of hostilities. The forces were led by a "general" elected by the army, and, if he fell in the fight, another was immediately appointed by the Cacique, if present, otherwise a rout usually resulted. Warriors desirous of obtaining distinction would often engage in single combat with one of the enemy, and, if victorious, received the title of *Tapaliqui* and were permitted to shave the head, leaving a little crown of hair on the top, about an inch long, with a longer tuft in the middle. This form of hair-dressing recalls the usual lock worn by Aztec warriors who had captured a prisoner. Captives were sacrificed after a victory in Mexican fashion on an altar in front of a shrine; but if no prisoners had been taken, the leaders assembled round the altar weeping. The weapons consisted of bows and arrows, spears, clubs, and the regular Mexican "sword," with heavy wooden blade, the edges of which were set with flakes of stone. Shields of bark or light wood were carried, covered with feather ornamentation or cotton textile, and cuirasses and thigh-pieces of quilted cotton served to give protection to the body. There was no regular distribution of booty, but each man kept what he himself had seized. Prisoners, if not sacrificed, were branded and had a front tooth extracted.

The Chorotega were good archers, and used arrows (furnished with stone heads or fish-spine points), spears and clubs. The women often accompanied their husbands to the fight and were adept in the use of the bow. It is probable that javelins, hurled by means of a wooden spear-thrower terminating in a hook, were employed by the Chorotega, at least in Nicoya, since a number of the stone hooks, rather similar to those of Ecuador, have been found there (Fig. 1). Possibly, too, many of the clubs were furnished with stone heads

of various shapes, as shown in Fig. 2, unless these objects were for ceremonial use.

Bows, spears and clubs seem to have been universal all over the Sumo-Mosquito territory and also in the

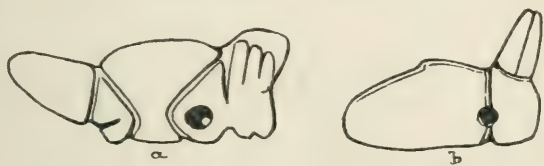


FIG. 1.—Stone hooks from spear-throwers; Nicoya. Carnegie Museum. After Hartman. Scale $\frac{2}{3}$.

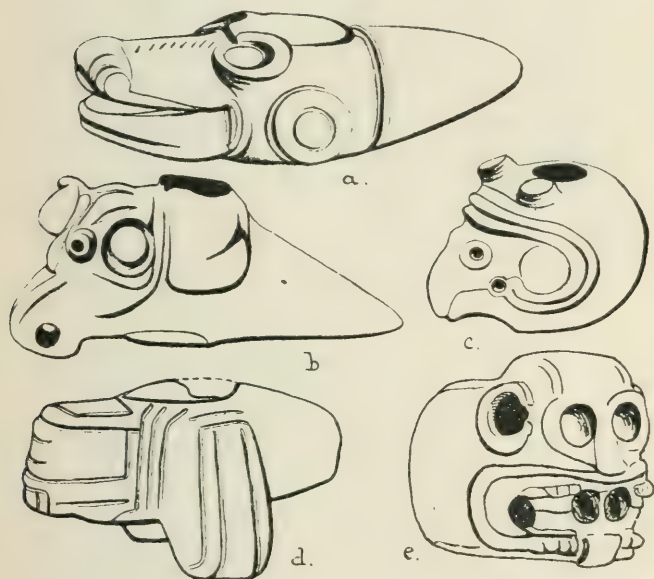


FIG. 2.—Stone club-heads; Nicoya. *a* and *e*, National Museum, Costa Rica; *c* and *d*, Carnegie Museum. After Hartman. Scale $\frac{1}{4}$.

Rama country, where they were found by Columbus at Cariari, or Cariay, at the mouth of the San Juan, the spears being tipped with fish-spines. The Mosquito appear to have made periodical raids upon the tribes

further inland, and the latter retaliated in kind when opportunity offered. Stone axes, cut from the solid, with single or double blade, have been found in the department of Chontales, and it is possible that these were weapons of war, though their significance may have been only ceremonial. The double pattern, as shown in Pl. I, has been discovered in the Mosquito region also. None of these tribes applied poison to their arrows.

The religion of the Nicaraos was in all essentials similar to that of the Aztecs, though the ritual was not so elaborate, and the beliefs had become somewhat corrupted during their migration. They believed that the earth and mankind had been created by two beings, a male, Tamagostad, and a female, Cipaltonal; these were the two chief gods, and war had been invented to provide them with sustenance, for they lived on blood and hearts, and the smoke of incense. These two are evidently the same as the Mexican Oxomoco and Cipactonal, the supernatural pair who assisted at the creation and taught men magic, though in Mexico no offerings were made to them. They are represented by the Nicaraos as living either in the east or in the sky, and it was believed that the souls of those dying in war went to them. Other gods were Miquetanteot, lord of the underworld (the Mexican Mictlantecutli), and Quiateot, the god of rain (in Mexico the word for rain was *quiauitl*). Quiateot was master of thunder and lightning also, and young boys and girls were sacrificed to him in order that he might give rain for the crops, just as in Mexico infants were sacrificed to Tlaloc, the rain-god of the valley, for the same purpose. Mixcoa (Mixcoatl), the old hunting-god of the Aztecs, in Nicaragua had become the god of trade, and traders offered him their own blood, drawing it from their tongues, in order to obtain luck in buying or selling. The practice of the worshipper making an offering of



1



2

B. & M.

NICARAGUA

1. STONE AXE
2. BURIAL-URN : OMETEPEC ISLAND

(Scale: 1, 2 7ths; 2, 1 6th)

his own blood was, of course, common throughout both the Mexican and the Mayan areas. As parents of the god Quiateot, two divinities are mentioned, Home-Atelite and Home-Ateciaguat. These are probably the counterparts of the two otiose sky- and creating-divinities known in Mexico as Ometecutli and Ome-ciuatl respectively. Another god, Ciagat, represented as assisting in the creation, must be the same as Ce Acatl, a calendrical name of the god Quetzalcoatl, who among the Mexicans was also a creator-god and lord of the calendar. Again, Oviedo states that the god of the winds was called "Chiquinau or Hecat," which must be a misrepresentation of the Mexican Chiquinaui Eecatl, a date sacred to the Mexican wind-god, which might well therefore be employed as his calendrical name. Another god was named Vizteot, and was regarded as the god of hunger. He is rather difficult to identify, but since one of the Mexican names for *octli* (the drink manufactured from the sap of the agave) was *uitztli*, he may have been one of the deities, of which there were a large number, presiding over this beverage in Mexico. As the Nicaraos were unable to procure *octli* in their new home the deity might well become associated with hunger. Further, reverence was paid to a hunting-god, in whose honour when a deer was flayed the dried blood was collected and suspended in a basket in the hut. Besides these, Oviedo gives the names of twenty gods presiding over feasts. These are, in fact, the names of the twenty day-signs of the Mexican ritual calendar or *tonalamatl*, and he further states that the year was divided into periods of 20 days; so it may be concluded that the Mexican calendrical system was in force among the Nicaraos.¹ The temples were built of timber and thatched, humble edifices compared with those of Mexico, and

¹ For the Mexican calendar and the gods mentioned, I must refer the reader to *Mexican Archaeology*, Chapters II and III.

contained many dark inner chambers. Near them were the sacrificial mounds, low pyramids supporting a sacrificial stone which was reached by a flight of steps. We are told that the temples were called Ochilobos, the form under which the name of the Aztec tribal god Uitzilopochtli was known to the early chroniclers. The sacrificial ceremony resembled that of Mexico, the victim was stretched on the stone and the priest, *Tamagoz* (Aztec, *Tlamacazqui*), slashed open his breast with a stone knife and tore out his heart, anointing the lips of the image with the blood. As in Mexico, cannibalism was an accompaniment of human sacrifice. The head of the victim was cut off, and the body dismembered and cooked in big pots with salt and pepper, being eaten subsequently with maize bread and cacao. The head was added to the pile in front of the temple (corresponding to the *tzompantli* in Mexico). A special programme was observed in the distribution of the flesh; the hearts were allotted to the priests, the thighs to the nobles, and the rest to the people. In ordinary cases the victims were slaves, prisoners and strangers, but in one ceremony a free-born youth was sacrificed. The ceremony in question corresponded to the oft-quoted Aztec festival in honour of Tezcatlipoca, in which the victim, regarded as the representative of the god himself, after a year spent in all the luxury that Mexican civilization could afford, was offered up upon the sacrificial stone. In Nicaragua the victim was destined to this fate from youth, was treated with great respect and even allowed to appropriate any property to which he took a fancy. It was believed that after death he became a "god or heavenly creature," and his body was not eaten, the feet, hands and entrails being buried in a gourd in front of the temple, the rest, including the heart, being burnt near certain trees in the neighbourhood. Besides the offering to Mixcoa mentioned above, ceremonial

blood-letting was practised in common. Peter Martyr describes one of these occasions, on which the Cacique, nobles and priests all assisted. A translation of Peter Martyr's *Decades* was made in 1612, by "M. Lok, Gent.," and the translator's English is so delightfully quaint that I make no apology for quoting his words in full: "The Kings, Priests, & Nobles sacrifice to one Idoll onely with their owne blood. This idol fastened to the toppe of a speare of three cubites long, the elder sorte authorized thereunto with great pompe in the face of heaven (carry) out of the Temple, where it is religiously kept all the yeere: & it is like the infernall goddes, after the same manner that is paynted upon the walles to terrifie men. The mytred Priestes goe before, & a multitude of people following after carry every one their banners of woven cotton, painted with a thousande colours, with the images & representations of their divels. From the Priestes shoulders, covered with divers linnen clothes, certaine belts, more than a finger thicke, hang downe unto the ancles, at the fringed endes whereof several purses are annexed, wherein they carry sharpe rasors of stone, & little bagges of powders made of certayne dried hearbes. The king & his Nobles follow the Priestes behinde in their order, & after them the confused multitude of the people to a man; none that can stand on his feete may bee absent from these ceremonies. Being come unto the appoynted place, first strawing sweete smelling hearbes, or spreading sheets or coverlettes of divers colours under them, that the speare may not touch the ground, they make a stand, & the priests supporting the same, they salute their litle divel with their accustomed songes & hymmes: the young men leape about it, tripping & dancing with a thousande kinds of antique sports, vaunting their agility & nimbleness of body by the shaking of their weapons & targets. The priestes making a sign unto them, every one

taketh his razor, & turning their eyes unto the Idoll, they gash & wound their owne tongues, some thrust them through, & the most part cut them so that the blood issueth forth in great abundance, all of them (as we sayd in the former sacrifices) rubbe the lippes & beard of that foolish idol; then presently applying the powder of that hearbe, they fill their woundes. They say the vertue of that powder is such that within a fewe houres their ulcers are cured, so that they seeme never to have beene cutte."

A peculiar ceremony was practised in order to obtain prosperity for the community. An important Cacique would enter a temple and remain in the precincts a whole year, offering prayers for the general well-being. At the end of the period of seclusion his reappearance in public was made the occasion of a great festival, at which his nose was pierced, a sign of great honour, and his place was taken by another Cacique. Individuals of lower rank might enter the less important temples for a similar purpose and time, provided that they were unmarried or had separated themselves from their wives for a year. In fact, the influence of women was considered to involve ceremonial impurity, since they were not allowed within the precincts of a shrine, and even the bodies of female sacrifices were never brought into temple premises.

Many of the rites were performed in connection with agriculture, and we are told that at the gathering of each kind of crop a ceremony was held in honour of the presiding deity. Though human sacrifice naturally is given great prominence in the pages of the early writers, no doubt it was not nearly so prevalent as in Mexico; far more common were offerings of birds, fish and maize.

Just as among the Aztec, the practice of confession existed among the Nicarao; a man whose conscience was troubled by some sin, such as the profanation

of a festival, blasphemy and so forth, made confession to an "aged man," probably a special grade of priest, who imposed some penance; for instance, the penitent was ordered to provide so much wood for the temple fires, or to sweep the temple precincts for so many days. As in Mexico, absolution could only be given once for a particular sin. The Confessors wore a gourd suspended round their necks in token of their office, they were celibate, lived in their own houses, and were nominated by general consent. The ordinary priests were usually married.

The Nicaraos believed that every individual had a soul, called *Julio*, which issued at death from the mouth of the possessor, and departed either to the abode of Tamagostad and Cipaltonal or to the realm of Miquetanteot in the underworld. The former and better fate was reserved for those who had been slain in battle or whose lives had been of particular merit, while the latter was the lot of those who died ingloriously at home. The souls of children dying before they had been weaned, or had tasted maize, were, it was believed, destined to be born again and in the same household. It is interesting to find here, as in so many other parts of America, a deluge tradition. Details are lacking, but it was thought that at some remote period the world had been totally destroyed by a great flood. Belief in the evil eye was prevalent, and this malign influence was especially feared on behalf of children. An interesting minor superstitious practice, which again has parallels elsewhere, notably in Peru, was the following: A traveller on a journey would pluck a handful of grass, or pick up a stone, and cast it by the wayside, believing that thereby he would escape fatigue and hunger.

As regards the Chorotega, Oviedo states definitely that their religion was similar to that of the Nicaraos. No doubt they had been greatly influenced by the

latter and had adopted many of their religious practices, notably human sacrifice with its attendant ceremonial cannibalism. From other authors a few additional details are gathered. There were a number of gods, presiding over water, battle, maize and other agricultural products, the produce-deities being apparently of particular importance. Oviedo himself describes a ceremony which took place at the cacao harvest in the village Tecoatega of the chief Agateite. In the centre of the space opposite the temple was a pole fixed in the ground, supporting the image of the cacao-god, Cacaguat, adorned with paint. Round this a company of some sixty men, with a number of women and children, performed a ceremonial dance, two and two. The men were nude, but painted "so as to appear clothed," and wore great feather diadems on their heads. The painting was supplemented with tufts of coloured cotton, cut small like down (in Mexico down itself was employed), and some of the performers wore masks. The dance-ground was marked off by four posts, between which cords were stretched. The same author also describes a festival, again apparently connected with agriculture, which took place three times a year on fixed dates in Nicoya. The head Cacique, his subordinate and most of the people, both men and women, painted themselves and assumed feather crests, the women wearing new sandals. Two circles were formed, one within the other, around the altar in front of the "pyramid"; the men forming the outer ring, the women the inner. Holding hands they danced round, the women imitating the movements of the man, while within the circles were men who gave drink to the dancers. After the dance several women were sacrificed, one after the other, their heads being cut off. The women present, with a great cry, fled to the woods, and were chased by the men and brought back. On the same or the next

day sheaves of maize were arranged round the altar, and the men gashed their tongues and other portions of their body, letting the blood fall upon the maize, which was then divided among those present. The object of the ceremony was evidently the promotion of fertility for the maize crop, and the maize which was sprinkled with the worshippers' blood was probably reserved for sowing. The fact that the victims were decapitated is interesting, since in Mexico the sacrifices offered to the fertility goddesses were killed by this method, which seems to have typified the reaping of the maize-ear. The Chorotegan idols were made of clay and wood, also of stone, to judge from certain of the remains, and occasionally of gold. None of the latter have survived, though the Cacique Nicoya gave Gil Gonzalez six golden images, each a span long, "which were ancestral gods." The close connection of religion with agriculture among the Chorotega is emphasized by the fact that the sowing of maize might only be performed by a person in a state of ceremonial purity, a condition which could only be attained by abstinence from women, salt and intoxicating liquor.

The worship of volcanoes, or rather of a volcano, is also found. Pascual de Andagoya states that human offerings were made to a volcano three leagues from Granada (probably that of Masaya), a virgin being cast into the crater from time to time. The statement of Oviedo, quoting Fr. Blas del Castillo, probably refers to the same fact, viz. that the Cacique of a village named Lenderi claimed often to have climbed with certain of his retainers to the crater, and there held converse with a naked old woman who issued from it and who uttered prophecies concerning the result of wars, prospects of rain, and the success of the harvest. Human sacrifices were offered to her on the day before or after consultation, and many fragments of the pots containing offerings of food and drink left by the

faithful were to be seen on the crater side. It is even stated that individuals would offer themselves as sacrifices.

In the Plain of Leon, Andagoya writes of a golden image attended by a chief priest who lived in the temple, and he states that this figure was anointed with the blood of the hearts of male and female victims as well as that drawn from the tongues of the worshippers. We hear too of an incident occurring in this locality which seems to suggest another Mexican practice. At a village five leagues from Leon the Spaniards met with armed resistance on the part of the inhabitants, who came out in force against them, led by certain individuals clad in the skins of aged men and women newly sacrificed. The chronicler explains this peculiar form of dress as a device to frighten the horses of the Spaniards, but the true explanation may be different. In Mexico, at an important festival to Xipe, a god who had a close connection with agriculture, a number of prisoners were sacrificed and flayed, their captors assuming their skins, which they wore for several days.¹ It is not unlikely that some such practice extended to Nicaragua, and that the warriors who had taken prisoners (i.e. the best fighters, who would naturally be in the forefront) wore their gruesome trophies in actual battle.

To judge from the archaeological remains of western Nicaragua and Nicoya, though many of the stone figurines (presumably idols) discovered, both large and small, are in human form, yet many are in the shape of jaguars, or monsters resembling that animal, and, in Nicoya, of birds. The last are almost invariably small, and pierced with holes for suspension (see Fig. 11, p. 59); probably they were worn as amulets. The inference to be drawn is that certain animals and birds were objects of worship or superstitious regard, or

¹ See *Mexican Archaeology*, pp. 37-39, 65.

that some of the gods were pictured in animal form. Many of the *metates*, or mealing-stones, especially those of Nicoya, are carved to represent a dragon-like creature, and it is possible that here we have a representation of the earth-monster who played so important a part in Mexican and Mayan beliefs. At least the form is applicable to the instrument by which the produce of the earth was prepared for human consumption.

Of the beliefs of the Sumo-Mosquito very little is known. Oviedo states that the inhabitants of the mountains in the province of Chontales made blood-offerings by piercing their tongues, while a few points of Sumo and Mosquito mythology have already been given on pp. 8-10. The Mosquito of the seventeenth century had certain diviners called *Succhea*, who held considerable political power since they were consulted on all important matters and their opinions were of the greatest weight in the tribal assemblies. Their advice was sought especially when a warlike expedition was being planned. After a feast which involved the consumption of much cassava-beer the *Succhea* summoned the "devil" (called *Wallasoe*) by prolonged incantations. The feat was not easy, since we are told that the spirit often kept the council waiting a couple of days before he condescended to appear. Even then he was visible only to the *Succhea*, who became frenzied under his inspiration. When the latter recovered he announced the oracle delivered to him by his supernatural visitor.

The *Succhea* was also the principal medical man, and as such was consulted by the friends of the patient as to the issue of the malady, and was also invited to apply treatment. For the latter purpose he visited the hut of the sick man by night, the patient was seated on his lap, and the two were covered with a sheet of bark. Lengthy incantations followed, accompanied by

prolonged sucking of portions of the patient's body, by which means the evil was supposed to be extracted. A peculiarity of medical treatment among this people lay in the fact that the patient was forced to eat as much as possible, especially of green turtle. The Mosquito believed that the soul after death went away to "another place," a sort of heaven, in which, however, no rewards or punishments were distributed. This heaven was quite distinct from that peopled by the souls of their foes of the interior, and was visited nightly by the sun after he had set upon this world.

Nothing is known of the religion of the early Rama tribes. In fact, the only light shed upon this subject lies in the statement that when Columbus visited the village Cariari, or Cariay, on the south bank of the river San Juan, the natives "when they came near the Christians scattered some powder about them in the air, and burning some of the same powder, endeavoured to make the smoke go towards the Christians." As most of the tribes usually imagined the Spaniards to be of divine origin when they first saw them, this may have been in the nature of a religious offering, and may point to the use of incense, as among the Mexican and Maya.

APPENDIX TO CHAPTER I

FOR the sake of convenience it will perhaps be as well to add here a short note on the linguistic classification of the peoples with whom the foregoing chapter has dealt. Most of the early chroniclers divide the tribes into five separate linguistic stocks, and though they do not all agree at first sight, it is possible to reconcile their accounts in a perfectly satisfactory manner. It would be beyond the scope of this book to enter into a lengthy discussion on the subject, and the following is only a brief summary. Those who wish to enter

more deeply into the problems involved may consult Bulletin 44 of the Bureau of American Ethnology, *Indian Languages of Mexico and Central America*, by Cyrus Thomas and John R. Swanton, and Dr. Walter Lehmann's paper, *Ergebnisse einer Forschungsreise in Mittelamerika und Mexico*, published in the *Zeitschrift für Ethnologie*, 1910, p. 687, as well as the different authors therein quoted. The appended table shows the various dialects according to the earliest authors.

LANGUAGES OF NICARAGUA.

	OVIEDO.	GOMARA.	HERRERA.	PALACIO.	TERM USED IN THIS BOOK.
1.	Mexicana	Mexicana	Mexicana	Pipil Corrupta ¹	Nicarao
2.	Chorotega	Chorotega	Chuloteca	Mangue	Chorotega
3.	Chondal	Chondal	Chontal	Chontal	Sumo- Mosquito
4.	Del Golfo de Orotiñaruba (Orotiña ar- riba) hacia la parte del Nor- deste	Coribici	Coribici	—	Rama- Guatuso
5.	Maribio	Orotiña	Orotiña	Maribio	Subtiaba

As regards the first three there is no difficulty. It has been stated that the Mangue are a branch of the Chorotega, while it seems now proved that the speech current in the province of Chontales extended over the rest of eastern Nicaragua. As regards the Rama-Guatuso, it has also been stated above that the Guatuso are almost certainly the descendants of the old Corobici, while the Rama speak an allied dialect. Oviedo, whose text seems to be corrupt at this point, defines the area of the speech, which thus corresponds. In the last however certain divergencies appear, but these can be reconciled

¹ The Pipil are a tribe of Nahuatl stock inhabiting Salvador.

without serious difficulty. First as regards the term Maribio. This problem is not difficult of solution, since the volcanoes in the neighbourhood of Chichigalpa and Leon to this day retain the name of "the Maribios," and therefore it is perfectly fair to identify the Maribio of Oviedo and Palacio with the remaining descendants of the old Subtiaba, who we know inhabited this region, but who are now extinct. The use of the term Orotiña by Gomara and Herrera to define the fifth speech is more puzzling, since there is plenty of evidence to show that the inhabitants of the Gulf of Orotiña, the Orotiñan proper, were a branch of Chorotega. Oviedo for instance makes a categorical statement to this effect. However Lehmann makes a most ingenious suggestion which appears to solve the difficulty. He notes that one of these very volcanoes, which are known by the name of the Maribios, still bears the name of Orota, and the inhabitants of its slopes and neighbourhood would naturally be termed by the Spaniards "Orotiñan." This conjecture at once identifies the Orotiña of Gomara and Herrera with the Subtiaba, and the whole of the table thus falls into line. That the name should occur in two authors is not surprising, since Gomara's work was first published in 1533, and Herrera probably copied his classification.

The classification of peoples, on broad linguistic lines, adopted in this book, is given in Map 1.

Explanation of Map 1

- | | |
|------------------------|----------------------------|
| 1a. Mangue | 5c. Ulua |
| 1b. Dirian | 5d. Mosquito |
| 1c. Nicoyan | 6a. Voto, Suere |
| 1d. Orotiñan | 6b. Guetar |
| 2. Subtiaba | 7. Talamancan ("Chiriqui") |
| 3. Nicarao (Nahuatl) | 8. Dorasque |
| 4a. Corobici (Guatuso) | 9. Guaymi |
| 4b. Rama | 10. Cueva (Coiba) |
| 5a. Matagalpa | 11. Choco |
| 5b. Sumo | |

CHAPTER II.—NICARAGUA AND N.E. COSTA RICA (*continued*)

THE dress of the Nicaraos, simple though it was, was yet more extensive than that of most of the tribes which form the subject of this volume. The material was almost invariably cotton, and the garments were frequently woven in several colours. The men usually wore a sleeveless tunic and a breechcloth, the latter undyed; women of rank wore an upper garment, similar to that of the men, and a skirt reaching to the ankles, while those of the lower classes wore merely a skirt falling to the knee. In either case the skirt was supported by a cotton belt. The usual form of coiffure consisted in shaving the head on the forehead and at the back, and leaving a crown of hair running from ear to ear. Paint was freely used as an aid to beauty, especially at festivals, and Oviedo mentions the fact that actual tattooing was performed by professional operators, who made incisions with a stone knife in the skin of the patient and rubbed in charcoal. Both men and women were tattooed, and though the statement of Oviedo is a little obscure, in so far as it is doubtful whether he is speaking of the Nicaraos or Chorotegas, there is no doubt that the custom prevailed in eastern Nicaragua. The Nicaraos moulded the heads of infants so as to produce a boss on either side and a depression in the middle. They alleged two reasons for this custom: first that the gods had told their ancestors that it gave a noble appearance to the individual so treated, and second that it made the head harder for carrying burdens. The Maya tribes further to the

north also practised head-deformation, but their aim was to produce a flat and receding brow. The ears were pierced for ornaments, and probably the lips also, in Mexican fashion.

As regards the Chorotega, most of our information relates to the Nicoyans, but it may be taken for certain that the Mangue and Dirian sections clad themselves in similar fashion, though their dress may have been modified by contact with the Nicarao. The Nicoyan men went nude, or wore a cotton breechcloth; the women a breechcloth, with, in some cases, a sleeveless tunic similar to that of the Nicarao. Long coloured belts, also of cotton, were worn in addition, wrapped round the waist. The men wore their hair long, arranged in a single braid down the back, or cut it rather short and brushed it up from the crown. The women occasionally adopted the former fashion, but more usually parted it in the middle and bound it up in a large knot over each ear. We hear of no head-dresses other than the feather diadems worn at festivals, but certain of the sculptures found on the islands in Lake Nicaragua represent figures with a kind of fillet round the forehead or a sort of flat cap. Combs were worn in the hair, constructed of stags' bone or black wood, the teeth attached by means of a red or black cement composed in the main of bat-dung. Paint was freely applied to face and body, and the ears and lips were pierced for the reception of bone and gold ornaments. Both sexes wore sandals of deerskin, with a cotton cord passing between the two first toes and attached to the ankle. We are told that women wore necklaces, and a large number of beads have been found in different localities. From the burial urns excavated on the island of Ometepc, in Lake Nicaragua, pierced shells and several hundred pottery beads, with incised ornamentation, have been taken, besides beads of green argillite, copper and a fragile white substance of

uncertain nature, probably the bone of the cuttle-fish. Beads of the latter material, of bowenite, shell and gypsum, have also been found in Nicoya. The shape of these beads varies from discoid to barrel-shaped and cylindrical, while the gold beads consist simply of small plates rolled into a tube. Gold beads, and studs for the ear and lip have been discovered in Nicoya, and also bird-shaped pendants which almost certainly were imported from further south. The lip-studs, according to statements of early writers, were removed at meals. Tatuings was certainly practised in Nicoya, where the favourite pattern was a jaguar depicted on the arm, and Oviedo's statement, quoted above, most likely had reference to the Chorotega as a whole.

In the Subtiaba district the men wore long pleated skirts of cotton, and in some places tunics also, while the women were clad in a short skirt and a head-cloth which fell down over the breast and upper arms.

In the Sumo territory, head-deformation was practised by at least one tribe, who pressed the heads of infants between a block of wood and a stone. This tribe was one of those hostile to the Mosquito, and therefore near the coast. They went naked except for necklets of shell beads, human teeth and nails (extracted from their unhappy captives) and beads purchased from the Mosquito (this in 1699). At a later period, Seemann states that tatuings by cautery was practised by the Sumo of the interior.

The Mosquito themselves simply wore a breechcloth of cotton textile or bark at ordinary times, though a number of ornaments were added on festal occasions. The author last quoted gives the gala dress of this people as the following. Besides the breechcloth, the men wore cotton bands with bright feathers attached round their wrists and above and below the knee. On the breast was a thin plate made out of a dollar-piece beaten out flat, the successor of the gold plate so

frequently seen on this coast at the time of Columbus. Between the shoulders was suspended a bone tube, made from a shin-bone, with a bunch of feathers, and shells depended from their ears. The septum of the nose was pierced for the reception of a rod of bone or cane, and a turtle-shell hook, inserted in a perforation in the under-lip, supported a pendant plate of brass or shell. The body, or the face only, was painted with pinewood charcoal, over which a "varnish" of turpentine was applied. The women wore skirts of bark from waist to mid-thigh, and painted themselves red with the juice of certain berries. To the west of Cape Gracias a Dios in the time of Columbus, certain of the coastal tribes, whether Sumo or Mosquito is uncertain, distended their ears to such an extent that they "may put a hen's egg into them," and further their arms and bodies "have figures wrought on them with fire" (like the Sumo mentioned by Seemann), or were covered with painted designs resembling "lions, tigers and castles." Black and red paint was applied on the occasion of festivals, and cotton tunics and head-cloths were sometimes seen.

On the Mosquito coast proper, Columbus found both sexes wearing breechcloths of cotton ornamented with coloured patterns, their faces and bodies liberally bedecked with red and black pigment, from the juice of certain berries.

At the village Cariari or Cariay, immediately south of the Rio San Juan, in Rama territory, in the time of Columbus the men went nude while the women wore skirts reaching to the ankle. In this neighbourhood the men had the advantage in the matter of hair-dressing, the fringe was cut moderately short, while the rest of the hair was allowed to grow long and bound up with fillets round the head in braids or rolls. The women wore it cut short.

The houses of the Nicarao were not large, they were

built of posts with reed walls and straw roofs. A village comprised two hundred or so of these huts, which were arranged along a wide street, the habitations of the chief men and the workers in gold being situated near that of the chief. The houses of the Chorotega were on a far larger scale, in this respect resembling the dwellings of the tribes further south. At the village Tecoatega, already mentioned, the residence of the Cacique included a spacious court, where, to the right of the entrance, was a large storehouse. Opposite was the Cacique's house, a low building about a hundred paces long, with eaves reaching to the ground. This low pattern of building was necessary in a country subject to hurricanes and earthquakes. The interior was dark, because there were no windows, and the door was kept shut during the day as a protection against mosquitoes. In the middle of the court was a long shelter without walls, eighty paces by ten, consisting of a cane roof thatched with reeds, supported by three pairs of wooden pillars and three stout cross-beams. The long axis ran from east to west, so as to give as much shelter from the sun as possible. Near the eastern end was a cane couch, ten feet long by five broad and three feet high, covered with palm-leaf mats and furnished with a wooden pillow. Close by were a bow and quiver of arrows and a gourd of honey, suspended from a post, and, ten paces off, a double row of mats and pillows, where the nobles reclined, feet inwards, in silence, awaiting the commands of the Cacique, since they acted as messengers and general executive. Attached to the shelter was a closed house where the women pounded maize, and hard by were two small huts in which were buried two of the Cacique's sons who had died in infancy. At the other end of the court were four long canes supporting the heads of deer killed by the Cacique, and near them was the day-house of his women, which was used as a

sleeping-place by their female attendants. The nobles slept under the shelter. Besides these buildings there were huts for guards, and a party, which was relieved at intervals, kept watch in the centre of the court. Fruit-trees surrounded the court.

The gabled shed without walls is found in other parts of the same area, for instance among the Guatuso, descendants of the Corobici, where it is supported on short posts and thatched with palm-leaves. The seventeenth-century author too mentions a similar pattern of habitation as characteristic of the Mosquito, stating that many of them were rather lofty. However, in later times the closed form of hut seems to have been common on the Mosquito coast. At Cariari in the Rama region Columbus' party was astonished at the "great wooden palace, thatched with canes," of the chief; but whether this was furnished with walls or not is not stated. It is probable, however, that this too was merely a shelter. Where the open house is found, there too hammocks are usually employed; but even where the hammock is in use it is not necessarily the only form of bed. For instance the Guatuso, who use the hammock, sleep also on the ground on couches of plantain leaves.

In this favoured region food was plentiful and easy to procure. On the sea-coast and on the shores of the lakes, fish (together with turtle and manatee on the east coast) constituted an important article of diet. Manatees were captured by means of harpoons, furnished with a long line and a float; fish were pierced with a smaller harpoon or javelin, besides being caught in nets. Sandy Key, at Cape Gracias a Dios, was a favourite resort for the neighbouring tribes, who used to repair thither in the dry season. The seventeenth-century writer gives an interesting account of the process. The harpoon or javelin the fishers "throw 20 or 30 yards from them at a single fish which

they cannot see through the thickness of the water, saving only a little curling wave which they call the fish's wake, and by that they guess how deep he swims under water, it may be 2 or 3 foot; in which exercise they very seldom miss their game."

Tribes in these localities were good watermen, especially the Mosquito, who were especially venturesome in their frail dug-out canoes. Hunting, by means of bows, snares and nets, was also practised to a considerable extent, especially by the inland peoples. Deer, pig, agouti, dumb dogs (as in Mexico), birds of all sorts, including the curassow (the "turkey" of the early chroniclers), and iguanas were the principal food-animals. Agriculture was practised to an extent varying directly with the cultural progress of the different tribes. Thus the Nicarao and Chorotega, the most advanced, were not entirely ignorant of the value of artificial irrigation in times of drought. The most important food-plant was maize, which was ground on a stone slab usually called by the Mexican name *metate*. These metates have been found in great numbers in Nicoya, and the ancient specimens, obtained from the prehistoric cemeteries, are much used by the inhabitants of the present day. Their different varieties are described below. Bananas, plantains and other fruits were much in use, and though cassava, the grated root of the yucca, was eaten, at any rate on the Mosquito coast, in historical times, it is uncertain to what extent it was known, if indeed at all, at an earlier date. Cannibalism, as we have seen, was practised by the Nicarao, though its significance was in the main ceremonial. The Chorotega were also cannibals, and it is uncertain whether they adopted the habit of eating human flesh from the former or not. The fact that they observed the same religious rites would seem to show that they had, but certainly both the Mosquito and the neighbouring Sumo tribes were man-eaters.

Of the two the Sumo seem to have been the true cannibals, the Mosquito only acting in retaliation. The former cooked their victims on a "barbecue," after removing their teeth and nails to serve as ornaments. The method consisted in placing the body on a wooden framework over a fire, the process of cooking being assisted by the rays of the tropical sun.

In the eastern portion of Nicaragua perhaps the most important beverage from the economic point of view was that prepared from the cacao, a plant which had been introduced into this region by the Nicaraos. Oviedo states that all the cacao plantations were in the possession of this people, but since the use of the produce had spread to the Chorotega, it is probable that the latter also cultivated it, though no doubt to a less extent. To prepare the drink known to the Mexicans as *chocolatl* (whence our own word "Chocolate"), the beans were first roasted in pans of pottery, and then ground on stones with a little water. The resultant paste was put into calabash cups, more water added, and, occasionally, a little spice. Among the Chorotega the drink was often coloured red with arnotto berries. Both these peoples prepared a kind of beer from maize, mixing the meal with water and allowing it to ferment, and the Chorotega are also said to have manufactured a "wine" from a kind of cherry (probably the *jocote*). Intoxicants played an important part at feasts, and, especially among the Chorotega, drunkenness was the inevitable sequel. Among this people it was the custom to drink alternate cups of chocolate and maize-beer until intoxication resulted. In fact, if a man failed to succumb to the effects of his potations, he was thought thereby to have proved himself no efficient warrior. Men alone as a rule took part in these drinking bouts, but the women of high rank organized similar orgies amongst themselves.

Quite a long list of the drinks prepared by the

Mosquito is given by the seventeenth-century writer. The method of preparation was practically the same in every case, the ingredients only differing. Thus plantains and bananas were roasted or boiled, mashed in a shell of water and left to ferment. Certain berries pounded in wooden mortars, and maize and cocoanuts ground between stones were similarly treated, but the most potent intoxicant was prepared from pineapples, pounded, mixed with water, and put aside in great gourds to ferment. At a later date at any rate a beverage was prepared from cassava. The preparation of this was practically similar to that of *kava* among the Polynesians. The root was patiently chewed by the women, who spat the residue into a bowl; water was added later, and fermentation was complete in two or three days. It is probable that the method, as well as the root, was introduced from further south (p. 114).

Salt is always an important commodity among primitive peoples, and no doubt the more advanced tribes collected it from the lagoons; but some of the Sumo tribes living on the edge of Mosquito territory not far from the sea employed a very primitive and laborious method. "They make a great fire close to the seaside, which when it has well burned the sticks asunder, they take them singly and dip the brands in the sea, snatching it out again not too soon nor too late; for by the first, the drops of salt water which remain boiling on the coal would be quite consumed through too much heat, the coal being not sufficiently quenched, and, by the latter mismanagement, would be quite extinguished, and want heat to turn those drops of water into corns of salt. Which as fast as made they slightly wipe off with their hand into a leaf, then put the brand's end into the fire again, and take out the fresh ones successively, that in half an hour's time a man may make about one pound of grey salt."

Throughout this region tobacco was known and

smoked in the form of cigars; fire was produced by friction, by the "twirling" process, as in Mexico.

Trade flourished everywhere except perhaps amongst the rudest hunting tribes of the interior. All villages of any size throughout the area inhabited by the Nicarao, Subtiaba, and Chorotega, including the Nicoyans, possessed open squares in which markets were held. Trade was for the most part in the hands of the women, in fact, we are told that among the Nicarao the men of the village were not allowed in their own market-place while trading was going on, though those from other villages were permitted entrance. Oviedo gives a long list of the goods commonly exposed for sale in the Nicarao market, including slaves, gold, textiles, maize, fish, "rabbits" (agouti), game, various birds and agricultural produce. No money in our sense of the word was employed, but maize, textiles, and especially cacao beans, constituted a rough-and-ready currency as in Mexico. But commerce of a far more extended nature also existed. We are told that the greater part of the gold was imported from other countries, and the nature of the ornaments found proves that they must have come from central and southern Costa Rica and even Panama. When the question of pottery is considered, it will be seen that there was considerable interchange of this commodity, and further it appears certain that the hard stone pendants characteristic of Nicoya found their way in some numbers to the country further south. Even among the Sumo-Mosquito peoples there was a restricted trade by narrow forest paths and mountain tracks, and by river in canoes; and we hear that certain Mosquito used to observe a truce on appointed days with their Sumo neighbours, with whom they were on terms of continual hostility, meeting them on an island in the Wanks or Coco River for the purpose of exchanging commodities. The Mosquito themselves

were daring traders by sea, and their excursions extended even as far as the Chiriqui lagoon. It is noticeable that many of the rivers in Costa Rica bear names which appear to have been adopted from the Mosquito tongue. The Rama too were accustomed to extend their trading operations to foreign tribes, as we know from the following fact. Columbus on his fourth voyage, after he had skirted the Mosquito coast, came to the village of Cariari, where he took on board certain natives to act as interpreters on his southward journey. These men accompanied him beyond the Rama territory, past the Chiriqui Lagoon and the coast of Veragua to Cubigar not far from Porto Bello (see the Map, Fig. 25, p. 95). At this point they left him, saying that they had come to the limit of the country which they knew from their commercial excursions.

Among the other occupations of the various tribes, the spinning and weaving of cotton was perhaps the most important. The Nicrao and Chorotega were particularly expert, and understood the preparation of parti-coloured cloths, though we do not know whether their patterns were dyed or inwoven. Spindlewhorls of pottery with incised patterns have been found in some numbers in Nicoya, and no doubt the process of spinning was the same as among the Mexicans, as shown in the Codex Mendoza.¹ Probably the same form of loom was also employed.² Spinning and weaving were the tasks of the women, except among the Chorotega, where the men, according to Herrera, prepared the thread. Among the Mosquito, bark was much in use as clothing, and it is probable that actual bark-cloth was prepared by hammering. The same article must have been manufactured in Nicoya, where stone hammers of the type used elsewhere in America for the preparation of bark-cloth have been discovered (Fig. 10, b), but these objects are unknown in the rest of

¹ See *Mexican Archaeology*, p. 161. ² *Loc. cit.*, p. 148.

the region now being described. In the eastern parts good cordage was manufactured from *nequen* fibre, and string for nets was prepared from the fibres of palm-leaves or bark soaked in water, or from a certain herb which was also used in the making of brooms. On the coast of Nicoya the collection of oysters and other shell-fish almost amounted to an industry, since both were important articles of food, while the oyster-shells served a further purpose ; fixed in double rows along a wooden shaft they made excellent canoe-paddles, or, singly at the end of a stick, shovels for use in the fields. Besides textiles and rude pottery, the Mosquito manufactured little, since the men, after they had secured food sufficient for a few days by fishing or hunting, were content to spend their time lying idle in their hammocks until a fresh supply was needed. However, as stated above, they did not hesitate to undertake trading voyages along the coast, which, considering the nature of their craft, can only be described as enterprising and courageous.

Of the amusements of the peoples under discussion something will have appeared from the preceding pages, since most of their festal gatherings had a religious or political significance, such as the festivals of the Nicarao and Chorotega, and the drinking-bouts of the Mosquito at which warlike expeditions were planned. But there were occasions when the feasting and dancing had no other ostensible object than the promotion of social enjoyment. One of these seems to have been the dance described by Oviedo as taking place at the village Tecoatega, already mentioned, where twenty men painted black and red danced to the sound of six drums under a shelter in the chief's courtyard. The drums are not described, but they were probably gongs constructed from hollow tree-trunks, since Benzoni states that the Nicarao performed dances in single file, following a leader, to the sound of gongs.

In the open space, near the chief, a body of twenty men, similarly painted and wearing feather crests, also performed a dance, carrying fly-whisks and javelins. Occasionally one of them would perform a *pas seul* in front of the chief, who cast at him a dozen or so light sticks, weighted with wax, with such force that many were broken by the impact. Their exertions were afterwards rewarded with cacao. A peculiar appliance, apparently used for amusement, was observed at the same village, consisting of a kind of see-saw. Two posts, connected by a cross-beam, supported a bar laid across the latter at right angles and secured in such a way that it could revolve; the performers clung one to each end.

Burial customs seem to have varied to some extent, even within the limits of the tribe. For instance, we read that among the Nicaraos when a chief died, a large quantity of textiles was collected, some of which were used to wrap the corpse. The rest, together with selected specimens of each class of personal property which he had possessed, garments, feather ornaments, fly-whisks and the like, were burnt together with the body. The ashes were then collected and placed, together with his ornaments of gold, in a pottery urn and buried before his house. Ordinary individuals were simply buried in their fields or huts, together with a selection of their personal property, or, if they had no children to inherit, with all the latter. Children were wrapped in cotton cloths and buried before the house door. A similar distinction according to rank existed among the historical Maya of Yucatan, whose chiefs were cremated and the ashes interred in urns, while the commoners were buried. The ordinary practice among the Aztecs was cremation. As the early Maya appear not to have burned their dead, it may well be that the habit of cremating Yucatec chiefs was introduced in later times, especially as some, at any

rate, of the ruling houses traced their origin to the Mexican Valley. The same explanation may hold good of the Nicarao, since it would seem that the aboriginal Chorotega did not cremate; and as the Nicarao must have won their way into the Rivas Department by force of arms, they may have regarded cremation as a superior form of disposal of the dead and have come eventually to regard it as the exclusive privilege of the ruling family.

As regards the Chorotega we have to rely almost entirely on archaeological evidence, and even that is scanty, since it refers almost exclusively to the island of Ometepe. This island fell within the Nicarao area, but the graves must almost certainly be regarded as Chorotegan. The burials are practically all in one style and the remains homogeneous, and in all but two cases the bones exhibited no traces of fire. The antiquity of some, at any rate, of the burials would appear to be considerable, since many have been found under a solid crust of decayed lava or cinder. From these facts it may be argued, firstly that the burials represent one people, secondly that they are not Nicarao, and thirdly that they are of considerable age. It is a fair conclusion that they belong to a period when the Chorotegan aborigines had not yet been driven from the islands by the intrusive Nicarao. Unfortunately the early literature affords no contributory evidence, since the only allusion to Chorotegan burial customs occurs in the account of the village Tecoatega, given on p. 35. Here it is stated that the chief's compound included two small huts which were the graves of two of his sons who had died in infancy.

The remains in Ometepe are enclosed in pottery vases, many of considerable size, of two patterns. One class is more or less spherical, made of dark, almost black, pottery, and each urn is furnished with a bowl-shaped cover of similar ware. The other class



Ernest Mooser

NICARAGUA
POTTERY FROM OMETEPEC ISLAND
(Scale: 1/4th)

consists of "slipper" shaped urns, of the type shown in Pl. I, which are capped with bowls of a different class of pottery. The cover-bowls are far more decorative, being covered with a cream-coloured slip on which patterns in black, red and brown are painted (Pl. II, 1, 2). These two kinds of urn with their respective types of cover are found side by side in the same cemeteries and no distinction of date or tribe can be made between them. Urn-burial is common in America, and among many tribes urns are used for secondary burial. That is to say, the body is first buried in the ordinary way, and the bones are collected later and laid finally to rest in a pottery vessel. Secondary burial is particularly characteristic of the southern continent east of the Andes, but the Chorotegan burials would seem to be primary. In many cases, at any rate, there are abundant signs that the bones have not been disarticulated; in the round vessels the body is arranged in a squatting position with the knees to the chin, while in the slipper-shaped urns it rests on its knees, which were directed towards the "toe" of the slipper. In cases where the skeleton has collapsed, the skull is found at the bottom of the vase surrounded by the other bones in their normal positions. Other pottery vessels are found in the urns and in their immediate neighbourhood, and in some cases, as at S. Helena (on the shore two and a half miles north of Moyogalpa), the skull is covered with one of the larger bowls. In some cases food-offerings have been buried with the body, such as beans, maize and various seeds; and beads and other ornaments invariably accompany the human remains. In many cases the cemeteries are crowded, the urns almost touching, and there is rarely any indication above ground of the graves beneath, though on the island of Ometepe the confines of the cemeteries are marked by stones projecting a few inches above the surface. At

S. Helena several upright basaltic columns were discovered among the burials, but when found they did not project above the surface of the ground. However, at Los Angeles, north of Moyogalpa, a truncated mound was observed, at the northern end of which was a row of unworked stone slabs ; and at Los Cocos, to the south, mounds containing burials were discovered. Graves similar in style to those on the island have been excavated on the opposite coast of Rivas, but a burial of a different type was unearthed at San Francisco, on the western side of Madera, the twin brother of Ometepec. This was a stone-lined cist, 17 feet long, the walls and roofing composed of slabs, with a flooring of similar slabs towards the northern end. A skull was found in the grave, together with pottery of a ruder description than that found elsewhere on the island, and bones were also discovered under the slabs on the floor. The condition of the bones seemed to show that the burial was of considerable age.

In Nicoya occur burials of the ordinary Chorotegan type, as described above, though the accompanying remains are often of a specialized type. In particular, pottery of a better class is more common, and several classes of finely wrought stone objects peculiar to the locality are found. In one of the most important cemeteries, at Las Guacas, to the south-east of the village of Nicoya, the bodies are not buried in urns, but simply laid in more or less oval or circular pits excavated in the hard substratum and refilled with the same earth. From the position of the bones it would appear that the bodies were arranged in a contracted position, and in isolated cases the skull was protected from the superincumbent earth by means of an inverted metate. In this cemetery, and indeed in most, the graves are marked by no external indication ; but occasionally mounds, circular or oval, have been heaped above, and are sometimes accompanied by stone pillars similar to

those at S. Helena. Thus at Carrizal, near Punta Arenas, mounds composed of river-stones have been observed; one of these, about 12 feet in diameter and 8 high, when opened was found to contain fragments of exceptionally good pottery and two stone metates. Hardly a single perfect pot was discovered, all having been smashed, apparently with intention. The fact that the mounds were composed of water-worn stones is interesting, since the rivers for many miles around are quite devoid of anything of the sort, and the stones therefore must have been brought from a considerable distance. Even in those localities where there were known to be settlements of Nicarao stock the graves do not differ from the rest, and it may be assumed either that these cemeteries antedate the Nicarao arrival, or that the immigrants adopted the burial customs of the people amongst whom they settled. At Tenorio, and other parts of the Corobici region, the graves are marked on the surface by tall upright corner-stones, with other stones arranged along the borders. For this reason they are fairly conspicuous, though veiled to some extent by the forest. These graves contain pottery of a particularly simple character.

The Sumo of the department of Chontales appear, from all accounts, to have practised simple inhumation and cremation indifferently, though the latter may have been adopted from the Nicarao. In either case the remains were deposited in urns on a hill summit in the savannah, and an artificial mound or cairn of stones heaped over them. Coarse pottery and stone metates seem to be the invariable accompaniments of a burial, and stone implements are occasionally found. These mounds are described below (p. 54).

The earliest statement referring to the burial customs of the Mosquito comes from the seventeenth-century author. He asserts that the deceased was interred in his house, together with his weapons and

ornaments, while his canoe was broken up and laid on his grave with other of his household goods. If he left no parents, brothers or children, behind him, his relations would destroy his plantations, to prevent the living from "robbing the dead." His wife, or wives, and nearest female relations spent three days in fasting and lamentations, after which the former, and any of the latter who were unmarried, might be taken as wives by others. If they found no one to support them, they frequently disappeared in the woods and committed suicide by hanging. In fact, the author quotes the case of a married woman, who, at the death of her father in the absence of her husband, perished by her own hand. In later times the custom would seem to have changed in so far that the dead man was buried in the bush and a small hut constructed over the grave. His connection with his former abode was, however, maintained by a thread stretched from the latter to his grave. The custom of destroying his personal property and plantations survived, and we are told that his name might not be mentioned, a tabu which is common in many other parts of the world. Feasts to the dead were also held, in which certain animal-masks were worn. Whether these had any totemic significance is not known.

As regards the Rama, from information obtained by Columbus at Cariari, the bodies of men of rank were dried over the fire on a wooden framework and preserved wrapped in leaves. In fact, Ferdinand Columbus remarks that the most remarkable sight yet seen by the voyagers was "in a great wooden palace, covered with canes, several tombs, in one of which was a dead body dry'd up and embalmed; in another two bodies, wrapped up in cotton sheets without any ill scent; and over each tomb was a board with the figures of beasts carved on it; and on some of them the effigies of the persons buried there, adorned with

Guaninies [ornaments of base gold], beads and other things they most value." The admiral himself describes this house as follows: "I saw there, built on a mountain, a sepulchre as large as a house and elaborately sculptured, the body lay uncovered and with the face downwards; they also spoke to me of other very excellent works of art." This method of preserving the dead was, as will be seen later, characteristic of the peoples further south (p. III).

CHAPTER III.—NICARAGUA AND N.E. COSTA RICA (*continued*)

TO all intents and purposes the inhabitants of the whole of this region were living in an age of stone at the time of the discovery. Gold indeed they knew and worked, and copper also to a very slight extent; but these two metals were used only for ornament, and all tools were constructed of stone, bone, the teeth of

animals and so forth. Stone axe- or adze-blades are found throughout, especially in Nicoya; they are for the most part longer and thicker than those found elsewhere in Central America, the section across the middle is oval or nearly circular, and the edge, in the majority of cases, is curved. They are usually well polished except at the butt, and are never provided with grooves or notches to facilitate attachment to a haft. As mentioned above, certain very peculiar single and double axes, haft and all carved from a single piece of stone, have been found in the Department of Chontales and again on the Mosquito coast (see Pl. I, I, p. 18).



FIG. 3.—Stone figure; Pensacola.
After Squier.

But far more elaborate specimens of stone-carving have been found at Norome near Masaya, at Subtiaba near Leon, on the island of Momotombito in Lake Managua, and on the islands of Zapatera, Ometepec, Pensacola and Solentiname in Lake Nicaragua. These

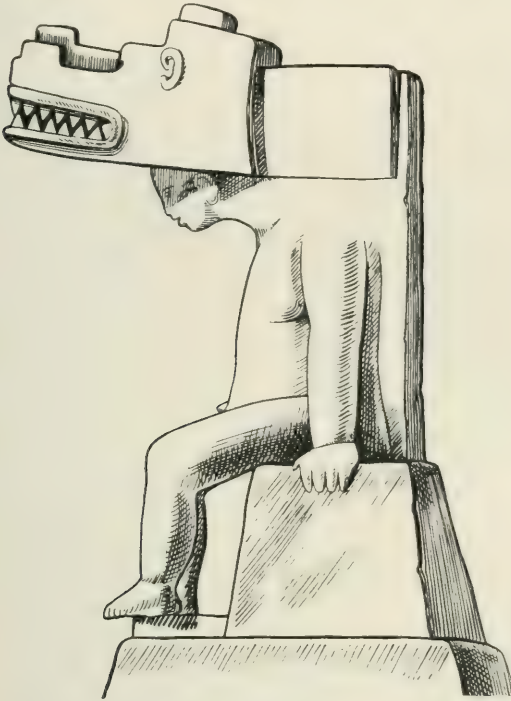


FIG. 4.—Stone figure ; Zapatera Is. *After Bovallius.*

are large monoliths, carved in the form of human figures, usually male, whose faces look out from the jaws of a monster, or who support on head and back the weight of a huge head of bird, beast or reptile, or occasionally the entire animal (Figs. 3-7). At Momotombito Squier speaks of about fifty of these, carved from black basalt, arranged in a square and

facing inwards. At Pensacola the material is sandstone, while on Zapatera it is again basalt. In the latter locality the monoliths are associated with pyramidal mounds of large unhewn stone blocks, piled one upon the other in fairly regular layers. From their

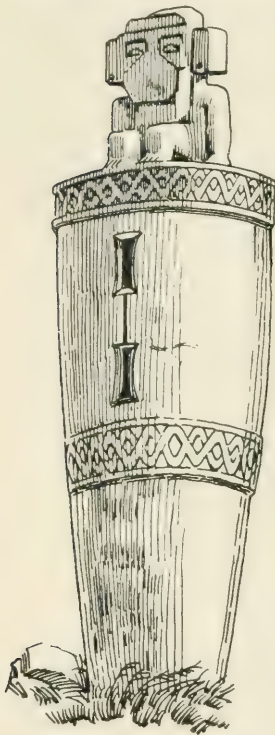


FIG. 5.—Stone figure; Zapatera Is. After Squier.

present position it would seem that the figures were grouped round the bases of these mounds, though it is impossible to speak with certainty until an accurate survey has been taken. Many of these monoliths represent a human figure without any associated animal, seated on a pillar, and sometimes with a headdress varying from a kind of fillet to a high-crowned cap. One of the pillars is interesting, since it evidently represents a gong of South American pattern (Fig. 5), while two figures with long beards, one of which is shown in Fig. 6, are remarkable from the fact that the natives have never been known to wear such an adornment. Stone figures with beast headdresses, associated with stone mounds, immediately suggest the famous stelae of Copan, Quirigua and other early Maya sites, while beast

headdresses are a common feature in Mexican manuscripts. It may be that both the mounds and monoliths are to be attributed to the Nicaraos, and are therefore later than the graves found on the same islands. At any rate, none of the former have as yet been reported from any district except that occupied by, or contingent to, this immigrant people, whose form of worship as we

know involved the use of sacrificial mounds. Still, on the other hand, we know that the Mosquito in historical times were in the habit of wearing animal-masks in funeral ceremonies, and their migration legend points to this region as their original home.

As to the animals depicted, a reptile suggesting a monstrous crocodile, or in other cases a snake, seems to be the commonest, and these are both found with great frequency in the art both of the Mexicans and Maya, the former in the guise of the earth-monster, termed *cipactli* by the Mexicans, while the snake had even greater prominence. The feathered snake in particular was symbolical of one of the highest gods, and it is worthy of note that one of the figures from Subtiaba represents a man looking from the jaws of this animal (Fig. 7). Again the feathered snake is shown clearly in a rock-painting near Managua (Fig. 8*b*), and the device shown in Fig. 8*a*, which occurs among the rock-sculptures of the island Ceiba, off Zapatera, may well be a conventional way of depicting the same mythological animal. As for the bearded figures, so rare in American archaeology,

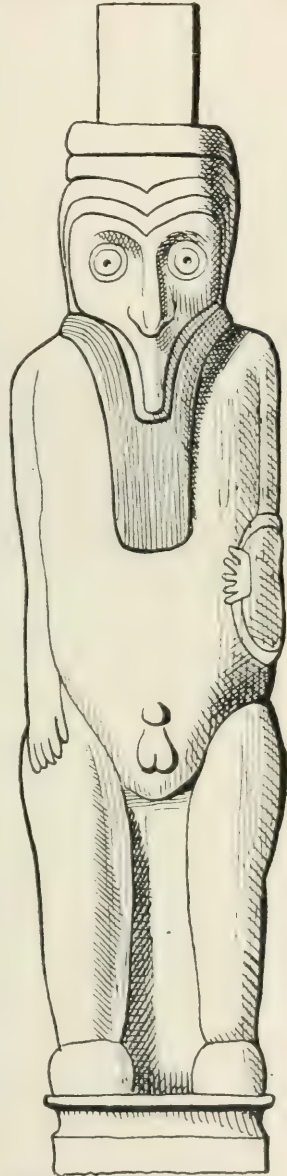


FIG. 6.—Stone figure; Zapatera Is. After Bovallius.

almost the only parallels are two stelae at Quirigua, and the figures of certain of the gods in the Maya manuscripts. It would be tempting to see in these monoliths traces of a former Maya population, antecedent to the Nicarao. Maya influence may be traced in this direction as far, according to some authorities, as the islands in



FIG. 7.—Stone figure;
Subtiaba.
After Squier.

Fonseca Bay, and from Fonseca Bay to the Nicaraguan lakes is not a very far cry. But it is difficult to distinguish between debased Maya art and the art of a Nahuatl tribe which has passed through Maya country and come under Maya influence, and in the present limited state of our knowledge of the archaeology of this region I think that it is safer to suspend judgment on this point.

In the Department of Chontales, in the Sumo region, occur cairns of loose rocks constructed on a rectangular ground-plan. Some of these are very large, measuring about 58 by 40 yards along the ground-line and 10 feet or less in height. The sides are usually sloped, or, in rare cases, perpendicular, while the edge of the upper surface is invariably furnished with a parapet. On all are found the fragments of statues and pedestals, or the holes where they were planted. The position of the remains would seem to indicate that there was originally a small statue placed at each corner, and one or more larger in the centre. A large example of these mounds, situated at Libertad near Chontales, when opened was found to contain a number of metates and coarse pottery vases, while in others burial urns have been discovered.

Of other works involving combined labour there is

1

2



COSTA RICA

1. STONE STOOL; TALAMANCAN
 2. POTTERY STOOL; TALAMANCAN
 - 3, 4. STONE *METATE*; NICOYA
- (Scale: 1, 2, 1 6th; 3, 4, 1 8th)

little trace, or rather little has been reported up to the present time. Squier mentions some peculiar "trenches," near Juygalpa, in Chontales, 3 or 4 yards wide at the bottom, and extending away indefinitely in a straight line. At intervals the trench widened out into oval sunken areas, 60 to 80 feet across, in some of which were small mounds. Hartman describes a "sunk road," 50 centimetres deep, running from the cemetery at Las Guacas, in Nicoya, northward over the sierras, and it may be that the excavations in Chontales are roads also. Hartman, too, speaks of remains of a stone



FIG. 8.—*a*, rock carving, Ceiba Is. ; *b*, rock painting, near Managua.

building in the same locality, practically the only one reported from the whole region.

Some of the most interesting of the stone remains of this area are the metates. Like the Mexicans, the inhabitants were in the habit of grinding their grain on oblong slabs of stone, usually supported on three legs cut from the solid, flat in the direction of the transverse diameter, but concave longitudinally. To triturate the grain a subcylindrical stone roller was used, the ends of which projected beyond the edges of the metate and were grasped by the user. Many of these rollers have also been found, some of them showing signs of considerable wear. Metates are

among the most frequent of the finds, and great numbers have been discovered in Nicoya, where there is a regular trade in them for use by the present-day inhabitants. Hartman estimates that two thousand must have been excavated from the cemetery of Las Guacas alone. Many of these metates are quite plain, but numbers of the Nicoyan specimens are elaborately carved. The labour involved in producing one of these utensils from solid stone without the aid of metal may be imagined. Hartman classifies the Nicoyan metates as falling into two types, one in which the legs are circular in section, and the other in which they are triangular. The ornamentation is naturally for the most part confined to the under side and legs, though the upper surface may be decorated with an ornamental border or a panel of carving across one end. The ornament is in low relief, and the commonest designs in the case both of panel and of border are the guilloche, twist and interlaced ornament. The ornament on the under side, also in low relief, may be similar, though concentric squares and other formal designs occur; but the most interesting are those which present the figure of a man or some animal, such as jaguar, monkey, bird, alligator or bat. In some cases the head of the animal in high relief constitutes one of the legs, this in a few of the round-legged type. The flat-legged type (Pl. III, 3 and 4) includes specimens which, though smaller than many of the other class, are more highly ornamented. The legs themselves are usually perforated and carved in a design representing, or derived from, an inverted human figure. In many cases a pair of pierced knobs or loops project from the edge or under side of one of the ends, and sometimes their place is taken by the head of a jaguar or parrot, which gives the whole appliance a very animal-like appearance (Fig. 9).

As stated before, a stone roller of more or less

cylindrical shape was used in conjunction with the metates, but certain "stirrup"-shaped rubbing-stones have been found, though not in great numbers, which may have served the same purpose (Fig. 10a). Other industrial appliances are oval discoid stones,

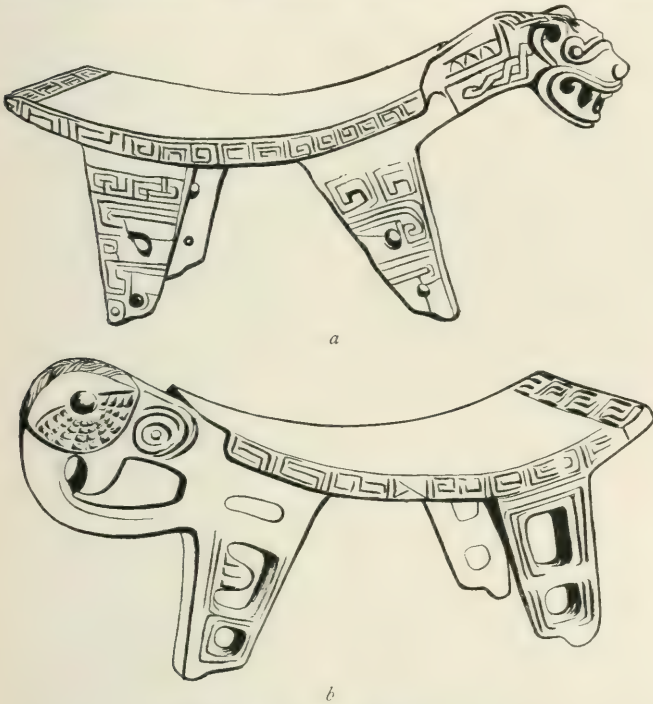


FIG. 9.—Stone *Metates*; Nicoya. *National Museum, Costa Rica.*
After Hartman. Scale, a, $\frac{1}{8}$; b, $\frac{1}{4}$.

with parallel grooves on their faces and another broader groove encircling the edge (Fig. 10b). These were probably used as beaters in the manufacture of bark-cloth, and were furnished with a handle by bending a pliant twig round the groove and securing the two ends by a lashing. One similar stone, but quadrangular with rounded corners, is figured by Bovallius

as coming from Zapatera. The cemetery of Las Guacas is peculiar in having produced a greater number of perforated stone mace-heads than any other in Central America (see Fig. 2, p. 17). Some of these are of the plain ring type, others are cylindrical with rows of projecting knobs, others again are more or less spherical and are carved to represent death's-heads or the heads of birds. Some, on one side of the perforation, have a conical pick-like projection, while on the other is a knob carved in the form of a bird's or alligator's head.

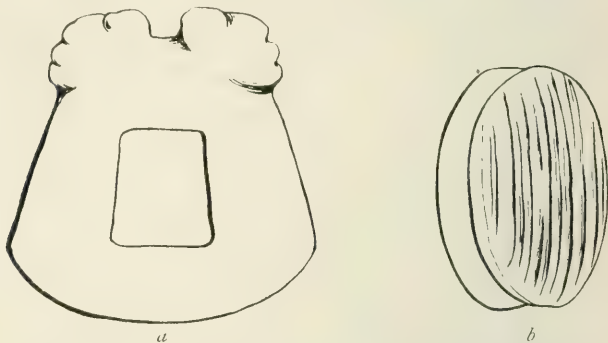


FIG. 10.—*a*, stone pestle; *b*, stone bark-beater; Nicoya.
a, National Museum, Costa Rica; *b*, Carnegie Museum.
 After Hartman. Scale, *a*, $\frac{2}{3}$; *b*, $\frac{1}{2}$.

None of these mace-heads are very large, and it seems probable that their use was ceremonial. The perforation is vertical and evidently intended for the reception of a wooden shaft; the sides are perpendicular, implying the use of a tubular drill, such as was employed in Mexico. Many of the specimens were obviously drilled from both sides, and a slight ridge is apparent half-way down the perforation, caused by the difficulty of making the two borings coincide exactly. Hartman was lucky enough to find one of the cores, thus proving conclusively that the drill was tubular; it was probably of bone or cane and was employed in conjunction with water and sand.

The Nicoyan cemeteries are remarkable for the number of jadeite pendants which have been found in them, usually carefully stored away in pottery vessels. These pendants conform to a number of types (Fig. 11). Some are simply oblong plates, unornamented, but beautifully polished; others, still in the form of plates, are engraved or carved in low relief to represent human figures, birds, alligators, frogs, turtles or bats; others again are fashioned in similar forms, but in the round. The plates were evidently separated from the block by

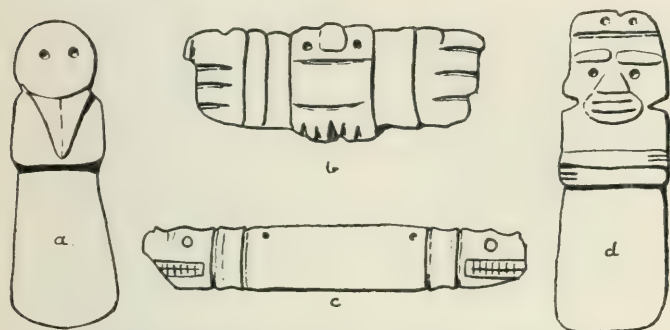


FIG. 11.—Stone Pendants; Nicoya. *a, c, d, Carnegie Museum; b, National Museum, Costa Rica. After Hartman. Scale $\frac{1}{3}$.*

sawing, probably by means of a string armed with sand; the operation was performed first from one side and then from the other, and a scar is frequently seen where the two grooves failed to coincide exactly. The labour involved in cutting, engraving and polishing these small objects must have been enormous, but to primitive man time is a matter of little importance, and there are plenty of parallels from other parts of the world. The New Zealanders, also a "Stone Age" people, fashioned their even more intractable jade with equal skill and by similar primitive means, and the Easter Islanders made fish-hooks of basalt, the preparation of which can have been little less laborious.

The cemetery of Las Guacas has produced more jadeite than the rest of Central America combined; a few similar pendants, probably of Nicoyan origin, have been found in central Costa Rica, while ornaments of this material have not been found in Salvador and are rare in Honduras and Guatemala. It is strange that no indication of the source of the Nicoyan jadeite is as yet forthcoming. That the inhabitants regarded it as a precious material is obvious from the fact that all sorts of scraps have been made into pendants, and occasionally a carved ornament has been sawn in half and worn without further modification of the design. Besides pendants, it was also used for the construction of slender tubes, sometimes with raised ornamental bands, the perforation of which must have presented great difficulties, of beads and of the hooks of spear-throwers, which often assume animal forms (Fig. 1, p. 17). It was hardly ever used for the manufacture of implements such as axe-blades. Beads of stone are frequently found in the burial-urns of the country further north, occurring in greater quantities in the smaller vases which probably contained the bodies of children. They have been pierced from either side by means of a solid drill, as is shown by the fact that the perforation is bi-conical or X-shaped in vertical section. Finally, coming from Nicoya, may be mentioned certain peculiar "waisted" stone axe-blades, to which parallels may be cited from the highlands of central Costa Rica (see Fig. 19*b*, p. 79).

From the Mosquito country, besides the peculiar double axes already mentioned (similar to Pl. I, 1, p. 18), come remarkable stone tripod bowls, with birds' heads in high relief (see Pl. VI, 1, p. 74), which indicate that the early inhabitants of this region of Nicaragua were possessed of no mean skill in the working of hard stone.

Fig. 1-6, 1907



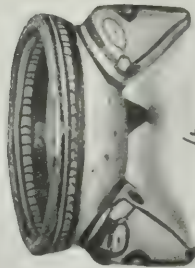
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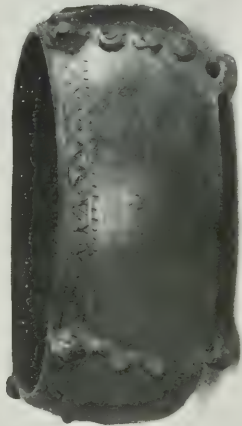
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NICARAGUA
POTTERY FROM OMETEPEC ISLAND
(Scale: 1/4 in.)

It is not very easy to write in a comprehensive manner about the pottery of this area, since, on the one hand, more material is required, and, on the other, the material available has not been properly classified. In the main two chief varieties may be distinguished, painted and unpainted. The pots falling in the first class are dependent upon relief and incised ornament for their decoration, those of the second rely principally on colour. The distinction is not absolute, since a few of the "unpainted" variety show stripes in dull red pigment, while many of the painted are embellished with moulded ornament. The distinguishing mark of the painted variety is the presence of a creamy slip which forms a background for the designs.

The paste of the unpainted class varies considerably in colour, from yellowish brown, through all shades of reddish brown, to deep chocolate and almost black. The forms are very varied, one of the most typical being the "slipper" shape, which is characteristic of the burial urns mentioned above (Pl. I, 2, p. 18). The ware is very fairly well fired, and the vessels, even the largest, are moulded with a good deal of taste, indicating considerable mastery over material on the part of the potter. The burial urns are only slightly decorated, the most constant ornament being a snake or snakes in relief at the "toe" of the slipper, though occasionally a grotesque face is found also at the other end. These urns are characteristic of the coast and islands of Lake Nicaragua. Associated with them are found many smaller vases of similar ware, displaying considerable variety of type, and often very graceful in outline, with thin and well-burnished walls (Pl. IV, p. 60). Circular bowls with plain or everted lips, and round-bottomed jars with small paired handles or an ornamental knob representing the head of an animal, are common, and also beakers with a grotesque face in relief. Many of these are furnished with a narrow band of incised

formal pattern, such as a zigzag, encircling the mouth. The mouths of the round-bottomed vases are constricted in varying degree, and many approximate to the bottle type; occasionally the base is slightly flattened, but a really flat bottom is hardly ever found, and vessels of this type must have required a stand. Flanged rings of clay have been discovered which probably served this purpose. Tripod bowls also occur, the legs of which are hollow, and are often moulded to represent the head of some beast or bird, a common characteristic of early American tripods from Vera Cruz to Panama. Many fragments are found consisting of

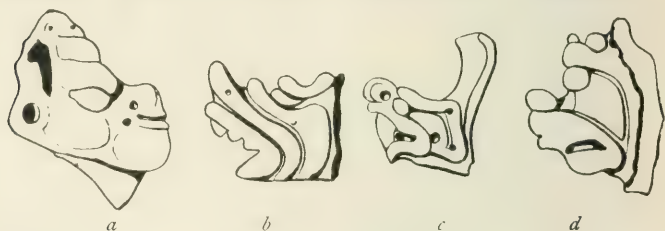


FIG. 12.—Pottery fragments; *a*, Ometepepec Is.; *b-d*, Zapatera.
After Bovallius. Scale $\frac{1}{3}$.

ornamental knobs, moulded to represent the heads of grotesque human beings and monsters (Fig. 12), the latter frequently recalling the dragon- or crocodile-like earth-monster of the Mexican and Maya. Many of the details in such cases have been applied, and vases have been found covered with formal designs in applied work, the details formed of the same conventional alligator scales or "scutes" which are so characteristic of the pottery of central Costa Rica (see p. 82).

The painted ware is more interesting from the point of view of decoration. The paste is homogeneous and well fired, and is covered with a thick cream-coloured slip on which the designs are painted in a variety of colours, red, orange and, rarely, blue. Details are often added in black, and black outlines are common.

Shapes are varied and elegant, various forms of bowls, often with incurved edges, some with tripod legs, and vases with three cascabel feet, or with a single expanding foot, are perhaps the most common. In the case of the tripod bowls the legs are hollow, and assume a variety of forms, grotesque snouty masks (Pl. IV, 6, p. 60) resembling the face of the Mexican wind-god, birds' heads (Pl. IV, 4), or entire birds (Fig. 13). Many show details in relief, such as the bird-heads on the bowl from Guanacaste shown in Fig. 15, or the faces moulded on the bowls from Ometepec (Pl. II, 1 and 2).

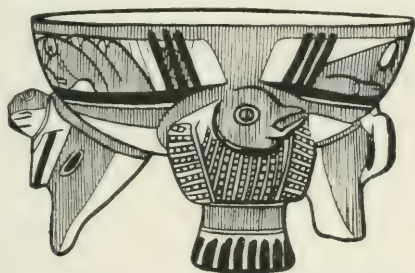


FIG. 13.—Pottery bowl; Ometepec Is. *National Museum, Washington. After Bransford.*

Small hollow figurines with stumpy arms and legs, of the type shown in Fig. 14, are especially common in Nicoya, but occur also on the islands in the lake. The finest specimens of the painted ware have been discovered in Nicoya, and two beautiful examples are shown on Pl. V, p. 64. In *a* the design is almost purely Mexican in type, and consists in an excellent portrait of the earth-monster as it appears in the Fejervary-Mayer manuscript (see *Mexican Archaeology*, Fig. 14*b*, p. 104). In *b* the design is less typically Mexican, though strongly reminiscent of that art; it represents a man armed with a large axe confronted by a jaguar or ocelot. The vase shown in Pl. II, Fig. 4, has a somewhat similar design. Some of these

finely painted vases have details moulded in relief, but vessels of this quality are exceedingly rare. Less uncommon are vases belonging to a type showing less perfection in workmanship, such as the tripod bowls illustrated in Pl. IV and Fig. 13, and the figurine, Fig. 14. These are remarkably similar to a variety of pottery from the central highlands of Costa Rica which is described on p. 84 and illustrated on Pl. XI, p. 86 ;



FIG. 14.—Pottery figure; Ometepe Is. After Bovallius. Scale $\frac{1}{2}$.

and it is not impossible that their wide distribution may be due to trade. Pottery of this class has been found on the islands of Lake Nicaragua, and even further north at Managua. Still more simple and less skilfully moulded are the pots shown in Fig. 15, which are characteristic of Guanacaste, and are attributed by Lehmann to the early Corobici. Though the painted ware of the second class has been discovered in Lake Nicaragua, it cannot be said to be characteristic of this particular region. Here a fourth variety of painted

ware is found, distinguished by highly specialized patterns which at first sight appear to be unconnected with the other types of polychrome pottery. Specimens of this are shown on Pl. II, 1-3, p. 44, and designs taken from a number of pots appear in Fig. 16 a-d. Included in this class are the bowls which serve as covers to the "slipper"-shaped burial-urns (Pl. II, 1 and 2), but other forms, such as the tripod bowl in Pl. II, occur also. Faces of a grotesque character moulded in low relief and emphasized by painted



1



2

Museo Nacional de Costa Rica

COSTA RICA
FINE POTTERY: NICOVA

details frequently appear on vessels of this type, but the principal feature is constituted by designs, arranged in panels, of a peculiarly puzzling nature. It has been found impossible to collect a sufficient number of these designs to work them out very convincingly, but I think that the origin of one particular set may appear from a comparison of the following details. One of the commonest forms of the design is shown in Fig. 16*a*. This occurs with great frequency, and the elements to which I would draw attention are the small circle enclosing a dot, the bracket-like figure below to the left, which is echoed by the outline of the panel next

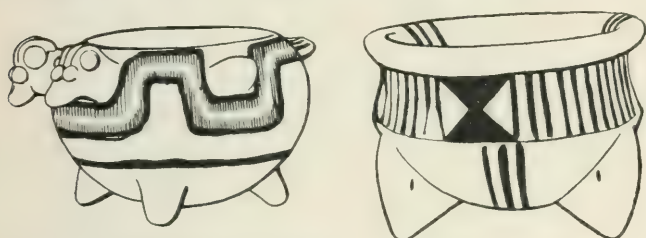


FIG. 15.—Pottery bowls; Guanacaste. *After Lehmann. Scale about $\frac{1}{3}$.*

to it, the engrailed edge of the panel itself, and the two panels to the right. Immediately to the right of the circle, and touching it, is a small detail shaped like a square bracket, which is also of importance. In *b* the panels to the right have disappeared, the circle has descended to the curved bracket, and the square bracket has moved up and round until it lies on the circle. The three combined elements now faintly resemble an eye with a heavy eyebrow and a wide-opened jaw. Such, in fact, I believe them to be, and I suggest Fig. 17*a*, taken from a tripod vase of the same class, as suggesting the key. Here we have a monster the outline of whose mouth and nose represents the curved bracket, but whose teeth in Fig. 16*a* have become separated from his jaw and appear in the engrailing of

66 CENTRAL AMERICAN ARCHAEOLOGY

the panel to the left, the outline of which echoes that of the jaw-element. The two panels to the right are the remains of the body as it appears in Fig. 17*a*. An

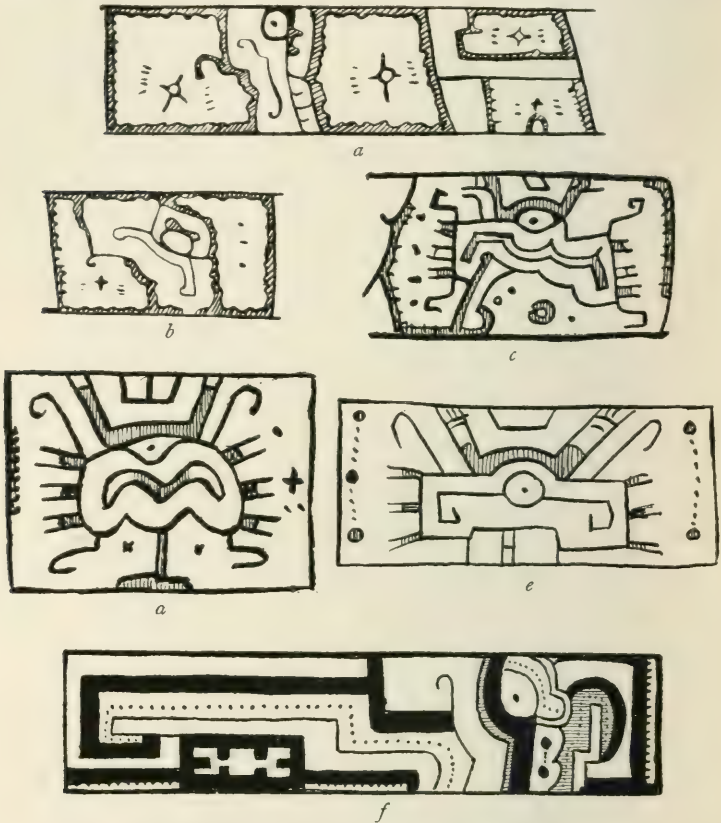


FIG. 16.—*a-e*, Designs from Ometepe pottery; *f*, design from Nicoyan vase.

intermediate step is provided by Fig. 16*f*, a panel from a vase of the first and best class, where the teeth are represented by an indented panel in its proper position, and where the eyebrow is also a prominent feature. Now in Mexican, and especially in Mayan art, both the

earth-monster and the feathered snake display as their main features an exaggerated upper jaw and an "eye-plate," the latter taken direct from the rattlesnake. The termination of the body of the monster in Fig. 17*a* suggests feathers, and I would conclude that the feathered snake is the root-idea of the ornamentation of this variety of pottery, and that here again we have a definite trace of influence coming from the north and west. The two most naturalistic snake designs which



a



b

FIG. 17.—*a*, Design from vase from Managua ; *b*, design from vase from Nicoya.

I have been able to discover are shown in Figs. 17*a* and *b*, one taken from a vase of the Lake Nicaragua class, the other from the finely painted Nicoyan class, and here too the same essential elements may be recognized. Fig. 16*b* however does not show the last stage of the design ; a further step appears in Fig. 16*c*, and yet another in Fig. 16*d*, where the same elements occur, but modified so as to produce symmetry. The last stage is shown in Fig. 16*e*, where the jaw has become a mere pair of frets appended to the eye, and the eyebrow becomes a dominant feature. I have given perhaps

undue space to the discussion of this class of ornamentation, because, apart from the fact that it provides, I believe, an explanation of the origin of the pattern, it furnishes an interesting example of the degradation of a naturalistic motive. Examples of such degradation are well known in other parts of the world, and the dissection of animals and modification of the various portions of their anatomy is a well-known feature of Late Celtic art. Other highly conventionalized designs occur, some perhaps derived from monkey-figures, while others are more obvious, and include the heads of birds. The latter usually appear as small details in the field of a panel, or disposed at intervals on the walls of a bowl.

Pottery whistles are often found in Nicoyan graves, furnished with one or more finger-holes by means of which the note may be varied, but they are not nearly so common as in the country further east.

One interesting vase is figured by Bransford, but seems to be unique in this area. This is a standing bowl fashioned from a reddish paste and covered with a cream slip in which patterns were incised. This class of ornament is well known in Guatemala, but is certainly not typical of the area with which we are immediately concerned.

This short survey of the pottery may be concluded by a reference to Oviedo, who states that a particularly fine class of ware was manufactured on the island of Chira, in the Gulf of Nicoya, black and lustrous as jet. The author further asserts that it formed an important article of trade, and it may be that some of the finer and darker examples of the unpainted ware discovered in the graves on the mainland and in the islands of the lake were imported thence.

Metal objects are not very common in this part of America. Gold figurines have been found, it is true, both in Nicoya and in the district of Lake Nicaragua, but they are all in the style characteristic of western

Panama, where they have been found in great numbers, and they too probably constituted an article of commerce. The reverse side of this almost certain intercourse is seen in the occasional presence, in southern Costa Rica and Panama, of jadeite objects identical in style with those found in such numbers in Nicoya. In Nicoya, curiously enough, gold is hardly ever found in graves containing jadeite ornaments, and *vice versa*.

Much of the gold is alloyed with copper, the latter frequently constituting a very high percentage of the alloy. But copper objects are very rare, the finest recorded being a mask in the form of a jaguar-head figured by Squier. The gold ornaments being of the same technique as those of Panama, it will be sufficient to refer to p. 124, where the latter are discussed in full.

On the whole the art of this region may be said to show connection both with the south and with the north. From the south came the gold and certain cultural features particularly connected with the Rama country, while to a northern source must be attributed certain artistic features exhibited in stone-carving and pottery. Whether the Mexican or Maya was responsible for the latter is uncertain, but I am inclined to think that both were laid under contribution. We know, at any rate, that a branch of the Nahuatl-speaking peoples penetrated into the country, but the art of the pottery is probably Chorotegan, for reasons connected with burial-customs; and, since that pottery is found in regions later occupied by the Nicaraos, it must antedate their immigration. If that is so, it may be that the Maya region was the source whence the artistic inspiration of the Chorotega was drawn. As for the technique of the pottery, certain similarities to that of the highland region of central Costa Rica are obvious, as will be seen later, where vases of the painted variety of the second class are common. If the painted pottery, then, betrays Maya influence, what of the

monolithic statues? It must be said that nothing seems to connect them with the pottery, as far as our present knowledge extends, and the fact that they are limited to the area subsequently occupied by the Nicarao and its immediate borders may be significant. What does appear clearly from the evidence at our disposal is that the culture of this region as a whole forms a connecting link between that to the north and that to the south now to be described, but, as far as the north is concerned, it is impossible at present to specify with any degree of certainty the different factors which have influenced it in this or that direction.

CHAPTER IV.—CENTRAL COSTA RICA

THE region next to be considered includes both the Atlantic and Pacific slopes of the highlands of Costa Rica immediately south of the area peopled by the Rama and Guatuso, and east of the Orotiñan territory. The southern boundary, as far as it is possible to determine at present, is formed roughly by a line extending due eastward across the Isthmus from the volcano Herradura. This region may be divided into two, by a line running east and west and passing a trifle to the south of the volcano known as Los Votos. In the northern section lived the Voto and Suere tribes, concerning whose archaeology practically nothing is known; while the southern district was peopled by the Guetar. These tribes appear to have spoken kindred dialects, but the exact relationship of their languages is a matter of some doubt. It seems probable, however, from the meagre information at our disposal, that the speech of this region belonged to the same family as those of the tribes to the south, and must therefore be credited with South American affinities.

Very little is known of these tribes from literary sources, and we are dependent almost entirely upon the spade for a knowledge of their culture. What little we do know seems to indicate that their manner of life did not in all probability differ much from that of the Rama.

From the stone carvings which have been discovered, we may assume that the men at any rate

went nude except perhaps for a low conical hat. From Benzoni we know that the Suere assumed body-paint of red and black, at all events in times of war, and wore diadems of brilliant feathers. The stone carvings also show that the Guetar wore rather large studs in the lobes of their ears, and shell beads have been discovered in the ancient cemeteries. Of nose-ornaments and lip-studs however there is no trace. From the number of metates which the early cemeteries have yielded we may conclude that agriculture was practised to some extent, and that maize was cultivated, while we are told that the natives of this region were not given to cannibalism. This fact would seem to show that their religion had not been modified to any extent by Mexican influences, though the obvious importance of the crocodile and jaguar in art, both of which animals held an important place in the religious symbolism of the Mexican and Maya peoples, may perhaps indicate that their beliefs were not entirely uninfluenced by the higher cultures further north. Of their weapons we know practically nothing, save that they were able to throw stones with such force as to batter a Spanish helmet, and that they sounded shell trumpets and drums previous to an attack. The stone axes which have been found are probably implements rather than weapons, and in all probability their chief arm of offence was the bow.

Of their houses equally little is known, but it would seem probable that stone entered to some slight extent into the construction of their dwellings. Numbers of small circles of unworked stones are found in certain localities, beneath which no graves have been revealed by excavation. It is probable that these circles mark the site of former dwellings, the walls of which may have been constructed of stones or based upon a stone foundation. But nothing of this nature is mentioned in the early literature. What we know from the latter source

seems to indicate that the buildings, at any rate of the Suere, were similar rather to those of the Chorotega. We are told, for instance, that on the River Pacuare in Suere territory a house was seen which was occupied by the Cacique when he came there to fish. This was a long oval building, 45 paces long and 9 wide, the walls constructed of reeds and the roof of palm-branches "remarkably well interlaced."

Concerning the burial customs of the Guetar people history is silent, and we are dependent on archaeological research alone. In contradistinction to the tribes of western Nicaragua, the people of this region did not deposit the remains of their dead in urns, but in stone-lined graves, situated sometimes well beneath the surface of the ground, sometimes in artificial mounds or platforms. Variations occur in the type of grave within the Guetar area, though they seem to be of no significance but dictated merely by the material at the disposal of the different settlements. Thus on the Atlantic side, at Mercedes and neighbouring cemeteries, the graves are rectangular pits, walled with water-worn stones, and roofed and floored with flat slabs. On the Pacific side—and this includes the majority of the burial-grounds in which investigations have been carried out—they are rectangular, constructed entirely of slabs, though the floor is not always paved. The explanation of the difference in type seems to lie in the fact that stone slabs were not easily procurable by the tribes at the former localities. At Santiago, east of Cartago, another type of grave has been discovered. Here Hartman opened an oval mound, which was found to contain burials of two varieties; in the eastern half of the mound were graves of the normal rectangular type, lined with slabs (Fig. 18*b*), while the western half was occupied by oval or circular graves, with rounded bottoms, lined with cobbles (Fig. 18*a*); in the soil above each

was a layer of similar cobbles, which however did not form a continuous roof. Both kinds of grave contained pottery and other remains of the same type. A variation of the slab-lined grave has been discovered on the west side of the Cartago valley. Here the slabs which formed the walls were square cut and not much larger than the size of an ordinary brick, while the roof and flooring were composed of slabs of the normal dimensions. The shape of these graves was rectangular. Not far from San José, Hartman discovered two small cemeteries in which not only were the graves

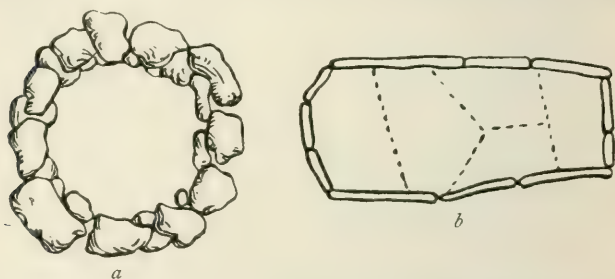


FIG. 18.—Guetar graves; Santiago, Costa Rica (the dotted lines represent the position of the cover-slabs). *After Hartman.*

of a distinct pattern, but the accompanying pottery differed rather in type from that found elsewhere. These graves were marked by no external indication on the surface of the ground, and the only sign of their presence was constituted by pottery fragments revealed by the rains. Three or four feet down, fragments of large tripod vases were discovered “in extraordinary profusion,” scattered through the soil. These had evidently been broken purposely over the burials, which occupied a lower position. No stone cists of any kind were found, and the shape of the graves could not be determined. Practically the only signs of the burials were the pots and bowls which had been deposited in unbroken condition with the bodies, and a



1



2



3

Bureau of American Republics

NICARAGUA

1. STONE BOWL, MOSQUITO COAST

COSTA RICA

2, 3. STONE FIGURE; GUETAR

(Scale: 1, 1/2"; 2, 3, 1/2")

few stone celts and club-heads (the latter evidently of Nicoyan origin) which also shared the last resting-place of their former owner.

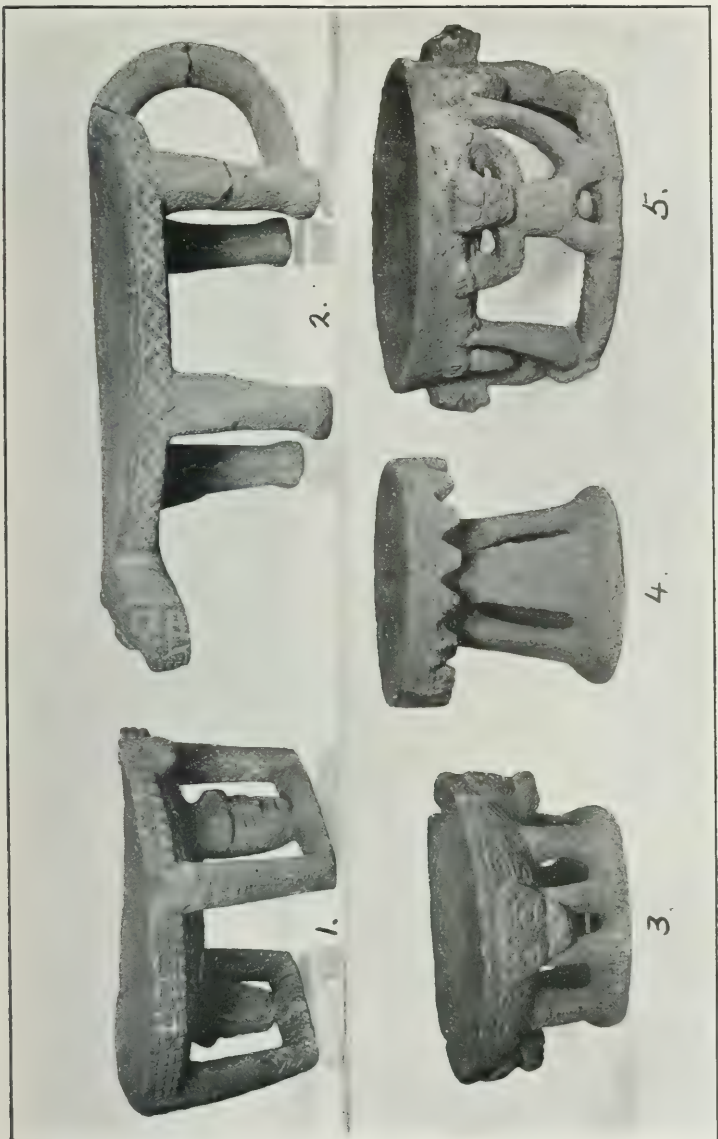
As stated before, many of the graves are situated in mounds. For instance, at Mercedes a circular platform was found to contain graves of the local type, while, besides the mound at Santiago, platforms containing graves were discovered at Orosi, south-east of Cartago, and mounds at Los Limones, to the south of the last-named. Sometimes there is no external evidence of a burial, but in many cases the surface of the ground is marked by a ring of stones. The limits of a cemetery are usually indicated by a stone enclosure. The burial-grounds are generally crowded, and an interesting cemetery was discovered at Chircot, north of Orosi, in which there were no less than three layers of burials. The lowest layer, which contained 35 burials, was divided in three groups; the second, 59 graves, was similarly distributed, but each group overlapped the lower; the topmost burials, which numbered 111, were evenly distributed. There were thus no less than 205 graves in an oval cemetery of about 20 by 15 metres. In one case five small cists were found under a common roof. The remains throughout the cemetery were absolutely homogeneous.

Skeletal remains are very rare in the Guetar cists, owing to the dampness of the soil. Occasionally, however, bones have been found, the position of which proves that the bodies, at any rate in the larger graves, were buried lying on the back in an extended position. But many of the cists are too small to contain a body at full length, and in these cases the corpse must have been arranged in a contracted posture; some indeed are so small that they seem almost to point to the occasional practice of secondary burial. It may be added that the graves as found are invariably filled with soil.

Apart from the burial mounds and platforms, stone-faced mounds and walls have been found, but not in great number. Hartman describes an interesting series at Mercedes. This series consisted of a principal mound in the shape of a truncated cone, and a number of walls, or low embankments, to one of which a smaller mound was attached. The larger mound was built on a foundation of river-stones, and apparently provided with a similar facing. I say "apparently," for excavation showed that the facing had been built up first in the form of a circular containing wall, and the interior space had been filled subsequently with earth. The mound and embankments here are the most elaborate constructional works which have been discovered in this area, though remains in similar style have been found elsewhere in the neighbourhood.

The Guetar, who, like the Chorotega, must have been dependent on stone tools, produced a large number of sculptures of a rather rude type, though they attempted nothing on the scale of the monolithic pillars found on Zapatera and elsewhere in the region last described. Hartman found two well-carved male figures at Mercedes, which originally must have stood on the large mound. These, like the other Guetar figures, were nude, though they wore conical caps, one of which was elaborately carved with figures of alligators. Similar figures, usually male, have been found elsewhere, though of inferior workmanship; one, in jaguar form, is shown on Pl. VI. Small squatting figures, with the arms clasped round the knees, or the fists touching the chin, have often been found in the Guetar Country, and are quite characteristic of this region. From the artistic point of view Guetar sculpture is rude and stiff, the figures present no individuality, and the hands and feet are clumsily modelled. Many of the defects, however, must be due to the material, which is invariably a hard and rather coarse-

British Museum



COSTA RICA

STONE STOOLS AND METATES; GUEJAR

(Scale: 1/5th)

grained lava. One of Hartman's most interesting discoveries was the site of an early stone-mason's workshop, where the ground was littered with figures and fragments of figures in all stages of preparation.

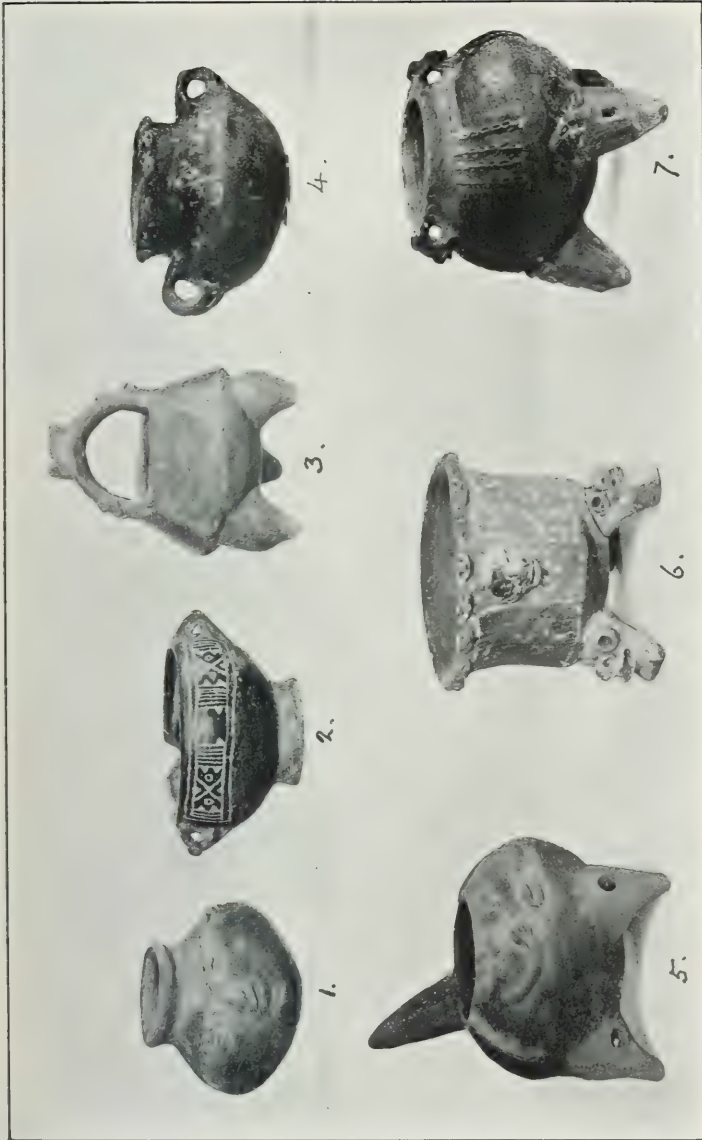
The best examples of Guetar art in stone are provided by their vessels, stools and metates. Stone vessels are rare, but a few examples are known in the form of a beaker with expanding foot, the latter usually carved in open-work. Between the stools and metates it is not easy to distinguish; the classification is quite arbitrary, and it may be that all are really metates, especially as the surface of many of the so-called stools exhibits traces of wear. The stools are circular and of several patterns. One is cylindrical, with slightly concave "seat," fringed with a row of small heads in relief (like Plate III, 1); in another the seat is supported on an open-work ring-base, carved in a number of small caryatid figures of jaguars or monkeys (Pl. VII, 5). In yet another type, the support for the seat is in the form of a single hollow expanding foot, usually carved with ornamental slits (Pl. VII, 4).

The metates consist of an oval plate furnished with a raised rim and supported on legs. The most typical pattern is carved in the form of a jaguar (Pl. VII, 2), and except on the upper and under sides of the plate is ornamented all over with well-finished designs. These usually consist of formal patterns, representing no doubt the markings on the animal's fur, and often the artist indulges a taste for realism by indicating the pads beneath the creature's foot. Another pattern is one in which each pair of legs is connected by a cross-bar, which is connected with the grinding-plate by a small human face (Pl. VII, 1). Other specimens, usually with three short legs, were found which are quite plain. Owing to the presence of the raised rim in the Guetar metate, a long rubbing-stone of the Nicaraguan type could not be used. The rubbing-stone, therefore, was

a short broad fragment, more or less oval in section, and often showing a flattening, due to use, on one side. One "stirrup"-shaped pestle, of the Nicoyan type (see Fig. 10*a*, p. 58) was found by Hartman at Orosi. The labour of carving these elaborate stools and metates from the solid block must have been enormous, especially as the sculptor had only stone tools at his disposal. It is worth while noting that the Guetar metates, while differing entirely in type from those of the Chorotega, are exactly similar to the specimens found in the Chiriqui area to the south.

Stone axe- or adze-blades have been found in considerable numbers, and the commonest forms are shown in Fig. 19*a* and *c*. Some are polished all over, others merely chipped, while others again have been only partially ground, so that traces of the original flaking are clearly visible. Narrow chisels of polished stone, similar to those of Jamaica (see Fig. 55*a*, p. 235) have also been found, as well as a couple or so of chipped "eared" celts, of a type extremely rare north of Ecuador (where, however, such axes are well polished). A peculiar type of axe is exemplified in a "waisted" pattern, similar to some occasionally found in Nicoya, but often provided with scalloped edge (Fig. 19*b*). These are partially polished, and must have been provided with a haft by bending a pliant twig round the "waist," and securing the ends by a lashing below. Hartman found at Orosi a small stone figure holding behind his back what appears to be one of these double axes.

It is interesting to note that Hartman in a grave at Orosi found several glass beads of the well-known "chevron" pattern which are obviously European in origin. This does not mean that the possessor with whom they were buried had ever met a white man, since beads pass readily from hand to hand and travel enormous distances from their place of origin. All



Boston Museum

COSTA RICA
TYPES OF GUETAR POTTERY: SAN ISIDRO
(Scale: 1/300)

that can be concluded from their presence is that Guetar culture was in full flower at the time that the Spaniards landed on the coast of America.

The Guetar cemeteries are rich in pottery, which is found in or close to the graves. Two main types occur,



FIG. 19.—Guetar celts; San Isidro. *British Museum.*
Scale $\frac{1}{2}$.

a superior class of ware with well-burnished slip on which various designs are painted, and an inferior class, which depends in the main on applied and moulded details for its ornamentation. The latter type is by far the more common and at the same time the more typical of the area.

As will be seen, the inferior pottery is sometimes furnished with a red or crimson slip, and occasionally

with rudely-painted designs in white, or ornamental bands in crimson, but decoration of this nature is almost invariably secondary to the ornamentation in relief.

An intermediate class, by no means common, is constituted by vases of a ware which, though thinner and more homogeneous than that of the pots with relief decoration, is not of the quality of the painted type. The decoration is usually painted, though occasionally moulded details appear.

The paste of the inferior and most characteristic ware varies in colour from red or reddish brown to chocolate. It is always rather coarse, though fairly well mixed, and contains an appreciable quantity of sand. On the whole the firing is more or less complete, though a dark line is often apparent at the heart of a fracture. The pots are rather heavy and brittle, and the walls are not very thin, though there is considerable variation in this respect. The coarsest and by far the thickest ware has been discovered in two small cemeteries near San José, and, since also it presents certain minor peculiarities of ornament, it has been named by Hartman "Curridabat" ware, from the small native village near which it was discovered.

In most cases the surface of the relief-ware has been fairly well burnished, though the marks of the burnisher are plainly visible, and sometimes a red or bright orange slip has been added. The shapes in which the early potter moulded the vases of this class are varied (see Pls. VIII-XI). A convenient classification would be threefold, tripod vases, round-bottomed vases, and vases with flat bottoms or a single expanding foot. The first and second varieties are closely akin, the forms differing only in the presence or absence of the feet. The commonest shape of body perhaps is a depressed sphere, with a short neck crowned with a thick lip, or with a thinner everted lip

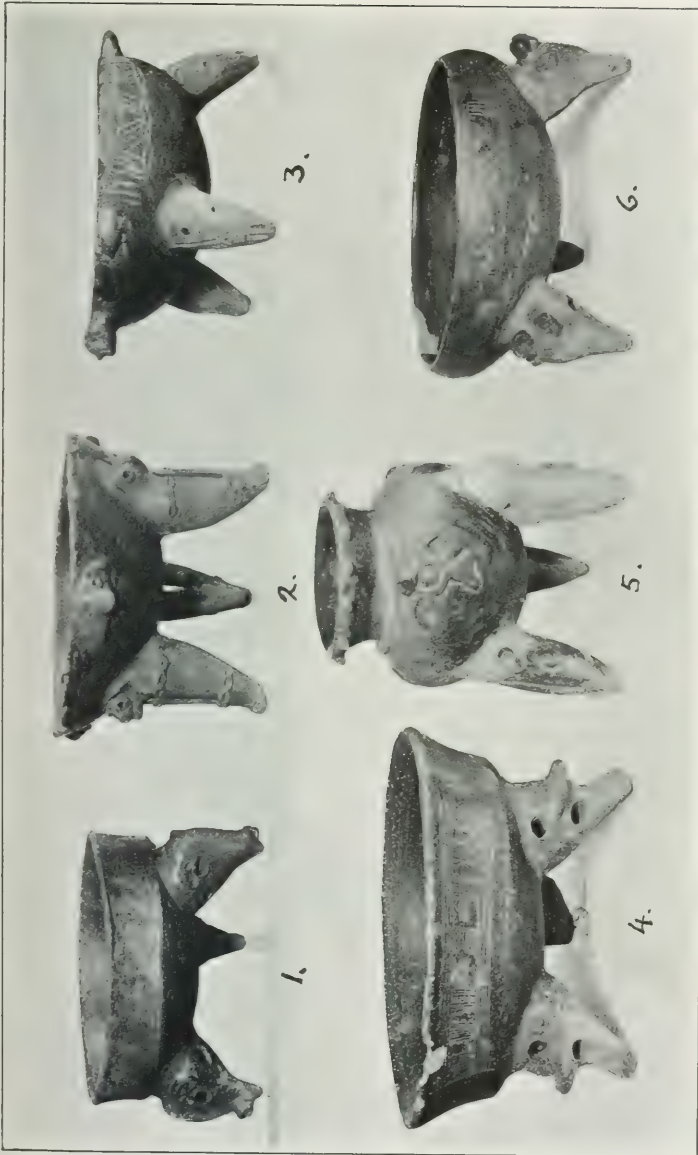
rising directly from the body. Handles are often present, usually paired, and connecting the lip with the body, though occasionally they are placed on the shoulders of the vase. Transverse handles are less common. As a whole handles vary from ribbon-like loops to mere pierced lugs, which degenerate further into knobs, while the loop-handle itself frequently adopts some animal form, jaguar or monkey. Occasionally a single loop-handle is seen, but the projecting conical form, such as appears on the vase in Pl. VIII, 5, is extremely uncommon. In rare cases the single handle extends across the mouth of the pot, from shoulder to shoulder, like the handle of a basket. Such a specimen is shown on Pl. VIII, 3. Often the body assumes an ovoid shape, such as the large vase on Pl. X, 2, while beakers, often with slightly incurving sides, are not uncommon. Bottle-forms, however, are rare. Tripod bowls and shallow dishes are common, the bodies varying in shape from hemispherical to depressed beaker-forms, as may be seen in Pls. VIII and IX. The legs of the tripod class are invariably hollow, and sometimes furnished with two or more slits or holes. In such cases they usually contain a small loose clay pellet and so form rattles. Where the body of the vase is of the globular variety these legs are more commonly simple conical projections, but in the ovoid vases, the beakers and the bowls, they are often elaborately moulded and furnished with applied details. In such cases they assume the form of grotesque snouty heads (Pls. VIII, 6, and IX, 4), animal-masks (Pl. IX, 1), or entire animal or human figures (Pl. IX, 2).

The ornamentation of the tripod vases and the round-bottomed variety consists in the main of details applied in relief, a smaller percentage of moulded ornament, and sometimes incised patterns. The latter are simple geometrical forms with occasional animal-motives, and appear most frequently on the pots made of

chocolate-coloured paste; the incisions are frequently filled with a pale-coloured clay which brings out the pattern against the dark paste of the vase (Pl. VIII, 2). The most frequent form of relief ornament consists in applied lines and dots forming a human face or the figure of an animal, such as a monkey, jaguar, bird or alligator. The latter is a common feature of the Curridabat pots, and occurs in all stages of conventionalization. In the most naturalistic forms this animal is shown with scales or "scutes" consisting of series of knobs, or discs with an oval depression in the centre. In the more conventionalized manifestations the alligator degenerates into a mere series of lines of such knobs or discs, and, at a further stage, the discs themselves coalesce so as to form punctuated lines (e.g. Pl. VIII, 7), and the punctuated line is perhaps the most characteristic form of relief ornamentation on pottery of this class throughout the Guetar area, either arranged in series or constituting the outline of a grotesque face or animal figure. Sometimes the bodies of the vases are furnished with one or more ornamental knobs, usually moulded in the form of an animal's head (Pls. VIII, 6, and IX, 2), and occasionally other knobs are added which represent legs or wings and tail (e.g. Pl. IX, 3, and Fig. 20 *a* and *d*). The vase then becomes a single zoomorphic unit, and presents the appearance of a complete animal or human being, but vessels of this type are not common. The rims of pots are frequently provided with an ornamental row of small projections, each of which represents a more or less degenerate grotesque face (Pl. VIII, 6). Apart from knobs, moulded decoration is by no means common. Even the knobs, like the legs, have in nearly all cases been formed separately and attached to the body of the vases by slip.

The above description of the tripod vases applies also to the round-bottomed class; it need only be

Bureau of Mines



COSTA RICA
TYPES OF CLAY POTTERY; SAN ESTERO
(Scale: 1:50)

added that the latter includes a higher percentage of bottle-forms and vessels with a single handle.

Vases with flat bases, or a single expanding foot, do not occur in great quantities. A few show engraved



FIG. 20.—Guetar pottery (*a, b, d*, Chircot; *c*, Las Huacos, Costa Rica). *Royal Ethnographical Museum, Stockholm.* After Hartman. Scale $\frac{1}{3}$.

ornament, but as a rule the decoration is limited to rows of animal-head knobs emphasizing the horizontal lines of the pot on which they occur. To this class belong the peculiar "hour-glass"-shaped bottomless forms, such as Fig. 20*b*, which most probably served the purpose of stands for the round-bottomed vases.

The finest class of pottery (Pls. XI and XII, 7 and 8, and Fig. 23) is represented in the graves by far fewer examples. This is a highly decorative ware, well modelled, of a pale red paste, well mixed and well fired. The walls are for the most part thinner than those of the vases just described, and are covered with a well-burnished creamy slip on which elaborate designs are painted in black, red, crimson and orange. The most frequent form is the tripod bowl, the legs of which are moulded to represent human figures (Pl. XI, 4), snouty masks, animals' heads (Pl. XI, 2), or assume a shape akin to the last-named (Pl. XI, 3). Sometimes a head is added at one side of the bowl, and the entire vessel then assumes an animal shape. A fine instance is shown on Pl. XI, 5, where the jaguar-form reproduces very closely one of the most characteristic patterns of metate. The most important portion of the painted decoration is usually found on the interior of the bowl, and certain designs tend to recur with some frequency. One of the most common is that shown on Pl. XII, 8. Here as the central feature we have a double animal-motive, somewhat highly conventionalized and arranged swastika-wise. This design resembles in type, though not in details, the double-bird motive so common on the coast of Peru. What animal is represented it is hard to say, but I am inclined to believe that it is meant to be the alligator. Round the central panel is a border of rosettes and other highly conventionalized details for which the animal world again appears to have been laid under contribution. Another common design is shown on the



Smithsonian Institution

2

COSTA RICA
GIUGGAR POTTERY: SAN ISIDRO
(Scale: 1/4th; 1/5, 1/10ths)



1

same plate, Fig. 7, which illustrates the interior of the bowl on Pl. XI, 4. Here the design seems to be taken from the human figure, though only the face portion can be recognized, occurring at the upper and lower sides of the bowl as arranged in the photograph. The design shown in Fig. 21, which occurs more than once, seems to be a simpler form of this. Other designs

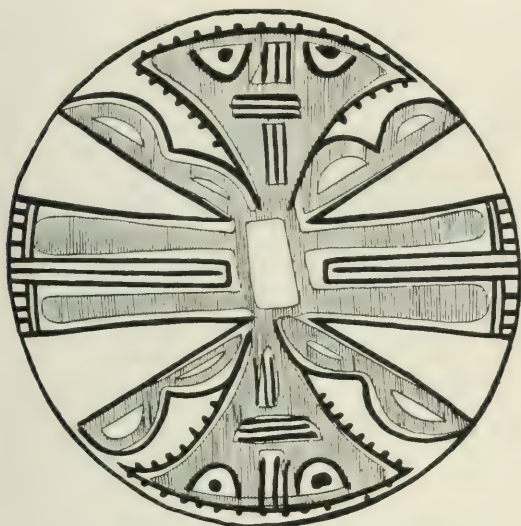


FIG. 21.—Design from a Guetar bowl; San Isidro.
British Museum.

occur also, but the above are the most typical; the rest, however, run on similar lines; for instance, the elaborate piece of decoration shown in Fig. 22, which is the interior ornament of the jaguar-shaped bowl on Pl. XI, 5. This illustrates well the tendency to group animal-elements in a symmetrical swastika-like design, while the border shows a series of stepped coils such as occur very frequently on certain Mexican vases and in the textiles and pots of the Peruvian coast. Besides tripods, vases with a single expanding foot are found

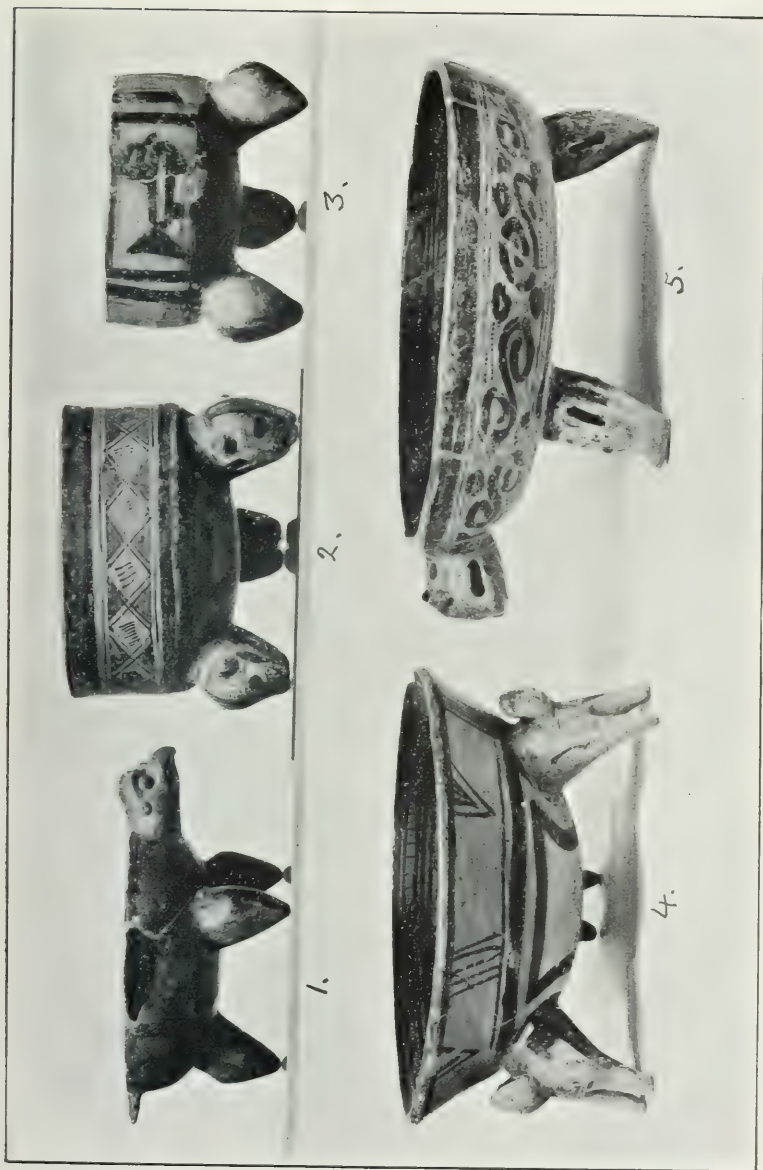
(Fig. 23), though less frequently; the elaborately painted vase on Pl. XII, 5 was also probably furnished originally with a narrow ring-foot. As a whole this class of finely-painted slip-ware shows a distinct similarity to the painted slip-ware of the Chorotega,



FIG. 22.—Design from the interior of the bowl, Plate XI, 5.

though the designs possess a character of their own. These designs are ruder than those found on the finest of the Nicoyan pottery, but bolder and far richer in colour than those characteristic of the slip-ware of Ometepec and neighbourhood. From the technical point of view, the Guetar slip-ware differs strangely from the relief-ware, which seems to be the kind really typical of the area, and from this point of view

Baselisk Museum



1.

2.

3.

4.

5.

FINE GUETAR POTTERY; SAN ISIDRO
(Scale: 1/4th)

one would be inclined to attribute its presence to influence emanating from Nicoya, were it not the fact that slip-ware of somewhat similar technique is found further to the south. The discussion of this question, therefore, must be left until after the pottery of the Chiriqui region has been described.

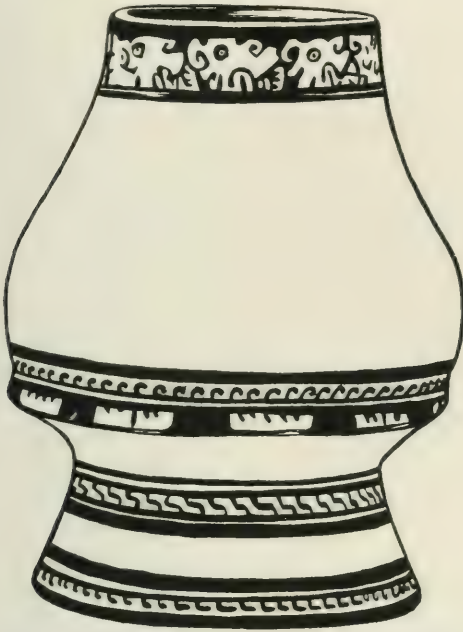


FIG. 23.—Guetar vase; Los Limones, Costa Rica.
*Royal Ethnographical Museum, Stockholm. After
Hartman. Scale $\frac{1}{2}$.*

The gulf between the slip-ware and the relief-ware is not, however, unbridged. As I have indicated above, a certain number of vases are found which seem to stand half-way between the two. These I regard as belonging to an "intermediate" class, the boundaries of which are not easy to determine. The paste in these cases is usually better mixed and fired than that of the relief-ware, being sometimes quite equal to that

of the painted, and varies in colour from reddish to buff. The presence of a slip, usually red or orange, but sometimes cream, is almost invariable, and applied ornament is correspondingly rare. Moulded details, however, are not uncommon, as, for instance, the human features on the neck of the vase shown on Pl. XII, 4, and the face on the large tripod on Pl. X, 1. The latter vase exhibits two of these faces, one on each side; the major portion of the body is covered with a thick red slip, but the faces are emphasized by an equally thick cream slip, upon which faint bands of

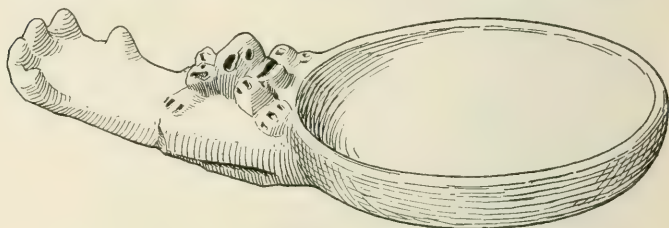


FIG. 24.—Pottery incense-spoon; Guetar; San Isidro. *British Museum.*

black may be traced. The ornament of the pale cream-coloured vase shown on Pl. XII, 6 is in a very dark brown, and I do not know of a similar specimen. Pl. XII, 1, is another instance of an unusual type; the paste is thin, very well fired and of a cream colour, while the designs are in a pale orange.

The position of such vases as the single-handled pot, shown on Pl. XII, 3, is difficult to fix. The paste is good, but rather thick, and it is covered with a well-burnished bright orange slip on which a linear design in white has been painted. Designs in white are occasionally seen on isolated specimens of the relief-ware, and this specimen must probably be included in that class, though the quality of the slip is considerably better than that occasionally found on the relief pottery.



COSTA RICA

FINE GUETAR POTTERY; SAN ISIDRO

(Scale: 1-6, 1/5th; 7, 8. 2/13ths)

British Museum

One class of object belonging to the relief-ware still remains unmentioned. This is constituted by a number of "spoons" with round bowl and straight handle, often terminating in a hand (Fig. 24). These are probably appliances for offering incense, and it may be mentioned that the handles of the Mexican censers frequently terminated in a similar design.

Objects of metal are extremely rare in this region; in fact, practically the only specimen known is a small copper figure quoted by Hartman, the surface of which is covered with gold. The technique of this figure is similar to that of specimens from Panama, and it may have been imported. It is significant that, according to Benzoni, when the Spaniards first visited Suere territory they were surprised that the inhabitants brought them no gold as an offering.

In conclusion it may be said that the remains of the Guetar area are remarkably homogeneous. The sole site which shows any distinct variation is that of Curridabat, the cemeteries of which contain no stone cists. But the pottery, though slightly different in type from that of the rest of the region, is nevertheless so closely akin that it can only be regarded as a local branch of the same art.

The influence of Chorotegan culture is evident, especially that branch which flourished in Nicoya, and no doubt there was considerable communication by way of trade between the two localities. But other influences, coming from the south, as will appear later, were equally strong, and the Guetar culture, though possessing a distinct individuality of its own, may be fairly regarded as a connecting link between the Chorotegan on the one hand and that of Chiriqui on the other. In the technique and artistic qualities of its products it fell behind both, but, even so, neither the stonework nor the pottery can be said to occupy a low place in the scale of primitive industries.

CHAPTER V.—SOUTHERN COSTA RICA AND PANAMA

I PROPOSE to deal with the remaining tribes of Costa Rica and Panama together, and this for several reasons. In the first place, except at two points, archaeological remains are very scanty, and at these two points they are practically homogeneous; in the second, we have definitely entered the region of languages belonging to the South American stock; in the third, the area is, and was, peopled by a large number of small tribes, speaking different dialects, whose interrelations are very puzzling, and to discuss them in detail would be far beyond the scope of this book. For the last reason I shall as far as possible abstain from mentioning tribal names, but deal with the population in groups. Those readers who wish to study the tribes in detail may be recommended to consult Bulletin 44 of the Bureau of American Ethnology, *Indian Languages of Mexico and Central America*, by Cyrus Thomas and John R. Swanton. The grouping adopted below is shown in Map I, p. 30.

The first group, which I shall call by the general name of Talamanca ("Chiriqui"), occupied the country south of the Guetar boundary (a line drawn eastward from the volcano Herradura), as far as an irregular line starting in a south-westerly direction from the north-western corner of the Chiriqui lagoon, then turning south-east for a longer distance, and finally with a southerly trend reaching the Pacific coast somewhere in the neighbourhood of the Fonseca river. The chief tribes for our purposes, on the Atlantic

side, are the Cabeçar, Tiribi and Bribri inhabiting the country to the north-west and west of the Bahia del Amirante ; on the Pacific side the Boruca or Brunca in the region of Boruca. Close to Boruca on the map appears Terraba, named after a colony of Tiribi, who, in the sixteenth century, were persuaded by the Franciscan Friars to migrate from the Atlantic side.

East of the Talamancan tribes were the Dorasque, now extinct as a linguistic element. Their eastern boundary is indeterminate, but it was probably represented by a line drawn south, perhaps with an easterly trend, from the southern end of the Chiriqui Lagoon. Settlements of Dorasque-speakers were reported at an earlier date in the neighbourhood of David, which I have assigned to the Talamancan area, since the remains in this neighbourhood are practically identical with those of the Boruca district. In fact, it is not improbable on archaeological evidence that Remedios also belonged to the Talamancan group, and that the Dorasque in early times did not extend to the Pacific coast.

East of the Dorasque were the Guaymi, occupying the country practically as far as the line of the present canal, and beyond them again were the Cueva, or Coiba, intermixed, as the southern continent is approached, with intrusive elements, to which the name Choco may be given, from South America.

As stated above, all these peoples were allied linguistically to the South American tribes, and much of their ethnology is akin to that of the Colombians. But there are elements which betray a certain kinship with the peoples to the north, and a colony of Nahuatl-speakers was discovered in the valley of the Telorio, near Amirante Bay, in the sixteenth century (see p. 7).

Only scattered details are known of the general life of the population of this area, but no doubt it did not differ in essentials from that of the more primitive

tribes as reported in later times. In the Talamancan country, west and north-west of the Bahia del Amirante, a tradition survived that the original inhabitants were divided into two tribes, one of which occupied the mountains, the other the plains. The mountaineers were the more primitive, and were originally tributary to the plain-dwellers, but the latter declined in numbers, and the former eventually occupied their lands and absorbed them. This legend may have some foundation in fact, since the Cabeçar have no chiefs of their own, but are subject to those of the Bribri; at the same time the principal priest of the region is always a Cabeçar, and the office is hereditary in his family. At the commencement of the eighteenth century war broke out between the Bribri and Tiribi, of which the result proved in favour of the former. The Tiribi submitted as a conquered people, and henceforward their chief has received confirmation in his office at the hands of the Bribri ruler, though no actual control is exercised over his actions. The Bribri system of chieftainship is not unlike that of the Mexicans, that is to say, the right to rule is hereditary in one family, and the ruler is elected from among its members. The supremacy of the chief is social rather than political; he is assigned the best hammock and the choicest food, and is, in fact, the representative of his tribe rather than a governor. At the time of the discovery, we are told, chiefs in the neighbourhood of the Bahia del Amirante were known by the title of *Quibi*.

It rather looks as if the same title were current in the Guaymi country also, since we hear of a Cacique named Quibio in Veragua. It is quite possible that the name of his office was applied to the individual by the early explorers. Among this tribe each community possessed its hereditary chief, who no doubt held much the same position as among the Talamanca. In this

region one of the *insignia* of a chief seems to have been a stool. As will be seen later, ornamental stools of stone and pottery are often found in the cemeteries of the Talamanca district, these being of the same pattern as are discovered in the burial-grounds of the Guetar. It was evidently considered as beneath the dignity of a chief to stand or to sit on the ground during an important interview, and we read that when a Guaymi chief came to meet Bartholomew Columbus, one of his retainers took a stone from the river, carefully rubbed it and placed it for the chief to use as a seat. Other chiefly *insignia* were, most probably, the golden bird figures which are found in southern Costa Rica and practically throughout Panama. At any rate, these relics of a past age are carried on the breasts of present-day chieftains as a badge of office. Some no doubt have been handed down from former times, carefully hidden from the covetous eyes of the Spanish adventurers, while others may well have been obtained from the early cemeteries.

Andagoya, writing in general terms of the Cueva country, gives a short account of the governmental system. Here there were numerous Caciques, none of very great importance, and we are even told that here and there were communities who paid respect to no Cacique. The names of many of these chieflings have been recorded, such as Comogre, Pocososa, Poncha and Tumaco (see the map, Fig. 25), but it would serve no useful purpose to give a complete list. The title of a chief was *Tiba*, and the principal male members of the chiefly families were called *Pirarayls*. The *Tiba* possessed certain judicial functions, and settled disputes in person, each party to the quarrel stating his case. No witnesses were necessary, since a lie to a chief was punishable by death. Otherwise the political power of a ruler was small, as in the region further west; no tribute was paid him, though his "subjects"

owed him a certain amount of personal service. For instance, if a chief wished to build a house, to sow, to get fish, or to dispatch a warlike expedition, he could call upon their services. While engaged upon any task for which they had been summoned by the Tiba, the workers were provided by him with food and drink. The same author tells us that the only offences known were robbery and murder, and both were punishable with death. The Pearl Islands were under the rule of one chief, who was engaged in more or less perpetual hostilities with those of the mainland in the neighbourhood of the Gulf of San Miguel.

In the province of Biru, situated around the upper valley of the Rio de las Balsas, was also a large number of chiefs. This people seem to have been in the main of Choco, that is to say South American, stock. Seven of these Caciques, after an attempt at resistance, became friendly to the Spanish explorers, and one of the seven, so we are told, was suzerain to the others. No trace of paramountcy of this kind can be found among the Cueva proper.

It is worth noting that, in the neighbourhood of Nombre de Dios, a tradition survived to the effect that in times past the coast was invaded by a people of alien speech, called Chuchures, who arrived in canoes from Honduras. They settled on the coast, but their numbers gradually declined owing to sickness and they finally disappeared. The legend is interesting since it gives us reason to think that coasting voyages such as this may have been not infrequent; we know that the interpreters whom Columbus took on board at Cariari said that their fellow-tribesmen were accustomed to trade along the coast beyond Porto Bello, and there is evidence that the inhabitants of the Gulf of San Miguel were well acquainted with the west coast of South America for a considerable distance. But a return will be made to this subject later (p. 127).

Gabb gives some account of the social observances of the Bribri and neighbouring tribes. It would appear that they are divided into clans within which marriage is not permitted, and that the individual belongs to the clan of his father. The laws relating to "prohibited degrees" in marriage are very strict, and the penalty for the intermarriage of cousins, however remote, is burial alive. So important is it for the individual to be sure of his descent, and so carefully are these prohibitions observed, that a woman will voluntarily confess the paternity of an illegitimate child, knowing that her husband has the right to beat and divorce her for her lapse from conjugal faithfulness, rather than allow the infant to grow up in ignorance of its true parentage. Apart from inheritance of the clan, there seems to be a tendency to matriarchy, as among the Mexicans, since at the death of the head of a family his brother is the normal successor. Failing brothers, the position passes to a cousin or uncle of the deceased. This tendency is exhibited in the marriage-customs. Women marry at puberty, and polygyny is optional on the part of the man; there is no ceremony, and the union lasts as long as is convenient to both parties. The significant point lies in the fact that in most cases the husband goes to live with his father-in-law and forms one of his family, though he will occasionally free himself from the obligation by paying compensation. Children are carried on the mother's back or astride her hip, secured by a strip of bark or a cloth. The prospective mother retires to a solitary shed in the woods, built for her by her husband, and is attended only by her mother or some old woman who cuts the umbilical cord with a bamboo knife. After her child is born, she must be purified by the medicine-man, *Awa* (see p. 103), who dips her fingers into water, which he drinks, and blows tobacco-smoke over her. He then purifies himself by washing his hands, and after this

both the patient and the Awa may return to their homes.

Concerning the customs relating to social organization in the rest of the area we know but little. Polygyny appears to have been the rule among the Cueva, and we are told that the principal wives of the chiefs were called *Hespode*. In all cases there was one chief wife, whose sons inherited, and it would seem that supplementary wives were rarely taken except by chiefs. Thus we are told that the Cacique Comogre had seven sons by different wives. The principal wife was handed over to her husband by her father at the conclusion of a feast at which much drink was consumed, and if later she was provided with companion wives, who were taken without ceremony, she ruled the harem. The sons of subordinate wives, though they did not inherit, were supported by the legitimate heir. As far as prohibited degrees are concerned, all we are told is that a man might not marry his father's principal wife, his own sister nor his daughter.

In the province known as Dabaibe (the valley of the Atrato, see the map, Fig. 25, p. 95) we hear that in some localities widows were not permitted to marry again, though in others they passed normally to the brothers of their former husbands. In this region the inhabitants were definitely of South American stock.

As regards war and weapons, the principal arms of offence appear to have been the bow and the throwing-spear. But there were certain peoples by whom the former weapon seems not to have been used. For instance, we are told definitely that the inhabitants of the Pearl Islands, the subjects of the chiefs Careta and Poncha, and the mountain tribes in the latter neighbourhood, did not use the bow. In most cases the heads of arrows seem to have been simply of palm-wood or bone, and the number of stone arrow-heads

found throughout this area is small, though we are told by Andagoya that they were employed in Cueva. The question of poison is interesting. The most westerly point at which we hear of its use is the region behind Porto Bello; west and south of the Gulf of San Miguel it appears sporadically, and is especially noted in the territory of two chiefs, definitely stated to be South American immigrants, to the north of Biru. I am inclined to think that its employment spread to the Isthmus from the southern continent; certainly it was not in general use there at the time of the discovery. It is questionable to what extent the spear-thrower was used in hurling the javelin, but it is probable that this appliance was rare. It is quoted only of the Guaymi, and no remains suggesting that it was known in former times have been found anywhere. Blow-guns are reported only of the Talamanca, and slings only of the eastern Cueva; spears seem to have been fairly general, and also clubs. In the east the last were sword-shaped, like the South American *macana*, by which name indeed they were known. Circular shields of tapir-hide were employed as a means of protection by the Bribri and their neighbours in more modern times, and are reported of the ancient Guaymi. But this form of defence is not met again until the province of Biru is reached, where a large pattern, covering the whole body, was employed.

To write more in detail, the modern bow of the Bribri and their neighbours is of palm-wood, five feet in length, with a cord of agave fibre. Various patterns of arrow are used, iron-bladed for war and hunting, long wooden points with many barbs for fish, and blunt knobs for birds. In this neighbourhood, when Columbus arrived, a body of some three hundred men made a warlike demonstration against him, brandishing clubs and javelins and spurting water from their mouths as a sign of defiance. In the territory of the

chief Paris,¹ the fighting-men observed a curious food tabu, abstaining from all flesh but that of iguanas and fish, while at Escoria, in the Guaymi region on the Pacific coast, Andagoya writes of "knights who were held to be very valiant. Their breasts were worked over in certain chains in links and curves. . . . I saw some by the side of whom the other Indians looked like dwarfs." It is possible that this statement may relate to the practice of tatu. Fire-arrows are mentioned as being employed in the Guaymi territory. In Cueva proved warriors were accorded a special title, and all men who had killed a foe or had received a wound in battle were called *Cabra*. We are told that among this people fights between the petty chieftains were of frequent occurrence and usually the result of disputes concerning hunting- and fishing-grounds. In fact, most of the tribes throughout the whole area seem to have been more or less continually at enmity with their neighbours, though no doubt the fights were productive of more noise than slaughter. The hostilities between the Bribri and their neighbours have already been mentioned, and a few details on this point are available from the early chroniclers. Thus we are told that the inhabitants of Escoria were hostile to those of Nata, and that the Cacique of the Pearl Islands was engaged in perpetual warfare with the tribes of the Gulf of San Miguel, especially the chief Tumaco, whose territory he frequently invaded. Again, the chief Careta was at war with his neighbour Poncha, while the people of Biru made it a practice to invade Chochama, on the Gulf of San Miguel, every full moon with a fleet of canoes, harrying the inhabitants to such an extent that they were afraid to go fishing. In this province of Biru, Andagoya mentions the existence of a "strong fortress," without specifying

¹ For this and the succeeding names of Caciques and localities, see the map, Fig. 25, p. 95.

its nature. However, he also states that the inhabitants of the country between Huista, in Guaymi territory, and Panama were in the habit of constructing defensive works, consisting of palisades made of strong thorny plants intertwined, and it is possible that Andagoya's "fortress" may have been of this character.

Our knowledge of the beliefs of the peoples inhabiting this area is extremely small as far as the period preceding and contemporary with the visit of Columbus is concerned. One of the few writers who mentions the subject at all is Benzoni, who states that the natives, not only of the islands, but also of the rest of the New World, worshipped idols of clay, wood, stone and gold, in the form of birds, jaguars, deer and other animals. These were kept hidden in caves and buried in the earth, and each one had its own name and definite functions. From the recurrence of certain animal forms in art we can well believe that various beasts and birds played an important part in native mythology and religion. The jaguar, which is mentioned by the author just quoted, is of very common occurrence, carved on stools and metates and cast in gold, while the alligator is perhaps the leading motive of pot-decoration, and also appears in the gold-work. The armadillo, again, is of great importance in connection with the ornamentation of pottery, as will be seen later. However, the exact place taken by animals in religion is unknown to us, and almost the only instance of a religious practice recorded by early authors of the western portion of the region concerns the coast of Veragua. Here it was considered necessary for those who intended to travel inland in search of gold to prepare themselves by fasting and continence, otherwise, it was believed, their search would prove unsuccessful. To this it may be added that a trace of sun-worship is furnished by Peter Martyr, who states that in this

province the sun was honoured with adoration at its rising.

Among the Cueva tribes, according to Andagoya, there was a number of divining priests, *Tecuria*, who communed with the "devil," *Turia*, in a small enclosure with no door or roof, later communicating the result of their negotiations with the spirit-world to the Cacique. Besides these, there were sorcerers who employed "salves" for bewitching others. One of the most important deities was the rain-god, Chipiripa, but ancestor-worship also seems to have been practised to a certain extent (see below, p. 111). A deluge legend was current among this people.

Peter Martyr states that among the Choco of Dabaibe (see the map, Fig. 25, p. 95) was an important idol, of the same name as the province, to which slaves were sacrificed at certain seasons. This idol Dabaibe represented a woman, who was regarded as the mother of the creator-god, although she was once human and was deified after her death, becoming mistress of the thunder and lightning. Certain ceremonies were performed in this neighbourhood in order to procure rain or sunshine when desired. The chief would retire with his priests into the "chapel" of his private idol, and mount a "pulpit," where he remained fasting until his prayers were answered. If the desired result were not obtained at the end of four days he was allowed to sustain his strength with a little maize meal in water.

Fortunately a very fair account of the Talamancan beliefs in recent times has been given by Gabb, and it is fair to infer that the early religion was something of the same kind, though, of course, changes must have taken place on lines parallel with those which have made their appearance in the material circumstances of the tribes.

The later Talamancans believe in the existence of a

supreme deity, though they pay him no active worship. They are more concerned with the various minor spirits, mainly malevolent, who haunt the forests, though even these they do not seem to fear very greatly. Still a man passing through an unfrequented region will make as little noise as possible in order to avoid attracting the attention of the local sprites. Other supernatural beings are supposed to live inside the rocks on certain mountain peaks, and to be the owners of the tapirs. They do not like being disturbed, and are said to punish rash intruders with death. The souls of the dead are believed to depart to a kind of paradise in the zenith, called Sibú, where they reside in ease and plenty; but the way thither is long and dangerous. Rivers full of alligators must be crossed, huge serpents must be passed and high hills and precipices must be surmounted; in fact, the journey is exactly similar to that undertaken by the disembodied spirit among the Mexicans. Talamancan religion, in actual practice, is to a great extent concerned with the avoidance of, and purification from, ceremonial uncleanness. Of this there are two kinds, *bukuru* and *nya*. Their effects are not stated, but no doubt they operate through auto-suggestion, since we are told that they are most likely to be incurred by the "weak." *Bukuru* is by far the more serious, and the most powerful agents in spreading the infection are a woman in her first pregnancy and a corpse. In order to obtain purification from *bukuru* the patient must abstain from salt, chocolate and tobacco for three days, and must carefully observe continence. After this he is washed ceremonially and fumigated with tobacco-smoke. *Nya* is a lesser form of impurity, thus though a woman in her first pregnancy is *bukuru*, after the child is born she is merely *nya*, and is purified as described above (p. 96). Material objects become *nya* through disuse, and if a native wishes to employ a

weapon or implement which has not been touched for some time he is careful to dispel the evil influence by beating the object with a stick. There is a general belief in the efficacy of charms, and prospective mothers wear a number of natural objects which are supposed to influence the constitution of the future child. Thus the eyes of a fish-hawk will enable him to discern the movements of fish beneath the water, jaguar-teeth will make him a successful hunter, and ornaments of horse-hair will give him strength to carry heavy loads.

Among the Bribri and their neighbours there are three classes of priest. The highest of these is the *Usekara*, of whom there is only one, and whose office is hereditary in a certain Cabeçar family. In importance he ranks second only to the chief, and is regarded with very great respect. In former times he claimed supernatural powers and was supposed to commune with the spirits. Next in importance rank the *Tsugur*, or ordinary priests, whose chief duties consist in presiding at the feasts to the dead. Their office also is hereditary, and they are the repositories of the ceremonial chants which are uttered on such occasions. These chants are in a jargon quite unintelligible, at any rate to the uninitiated, and, as no system of writing is known they have to be learnt by rote. Lowest in the hierarchy are the *Awa*, or medicine-men, who purify the ceremonially impure, practise rain-magic and treat the sick. Their profession is an open one, and their powers are supposed to be due to the possession of certain stones taken from the bodies of animals (*calculi*). Most of their incantations to control rain, to cure ill-luck and to banish snakes, consist in blowing clouds of tobacco-smoke in certain directions while various charms are uttered. To cure sickness they make passes over the body of the recumbent sufferer, holding in their hands some small animal, such as a chicken or a sloth, blowing smoke upon the patient and imposing certain restrictions

as regards diet. Probably the performance has as its root idea the transference of the malady to the animal. It is difficult to say how many of these practices and beliefs survive even since the time when Gabb wrote, but I have used the present tense in order to distinguish his statements from those of the early chroniclers and the evidence of archaeology.

The same author gives a good account of the burial ceremonies practised by the Bribri and their neighbours, and it will be as well to give a short survey of these before proceeding to describe the cemeteries which have been opened in the Talamanca district. At the death of a prominent man much food, chocolate and *chicha* (maize-beer) is prepared for the funeral feast; a sacred fire is kindled by the ancient means, a pair of fire-sticks (the "twirling" method), and this fire must be used for no ordinary purpose; it is kept burning for the nine days of the feast, and is then extinguished by the priest with a calabash of chocolate. It is evident that in ancient times much of the property of the deceased was buried with him, and an echo of this is seen in the present practice. During the feast, one of the guests, selected by general consent, relates a minute biography of the departed, having by his side a small heap of seeds and shavings. As he passes in review the various episodes of his life, he removes from time to time a seed or a shaving from the heap and deposits it by the corpse. Each of these represents some article of property, or some animal killed, such as the corn which the deceased planted on a particular occasion, the digging-stick he used, a fish he shot, the arrow which killed it, and so forth. If he were fortunate enough to possess one of the gold eagle-figures which are the *insignia* of rank, an image of this, cut from yucca-rind, is added, and the whole placed on the breast of the corpse. The body is next rolled in a bark-cloth, placed in a hammock, and wrapped in

leaves secured by lashings. It is then laid in a coffin and deposited on a bench in a deserted spot, concealed with brushwood. All this time it is dangerously impure (*bukuru*), and any domestic animal passing near it must be killed as unfit for food. For a year it lies in solitude, while the family collects food for the final ceremony, and plants maize from which to make *chicha*. When the year has passed, a president is appointed to supervise the proceedings, and a person specially set aside for the performance of unclean work collects and cleans the bones, which he arranges in a bundle, painted on the exterior with designs symbolical of the manner of death by which the deceased perished. This bundle is placed on a rack in the house where the feast is held, the latter consisting in a debauch which lasts several days, accompanied by dancing and singing to the sound of iguana-skin drums beaten with the fingers. Finally, after the leader has described in a chant the journey of the soul to Sibú, the sacred fire, kindled at the commencement of the proceedings, is extinguished with chocolate, and the bones are carried in procession to their final resting-place. This is a pit some four feet deep, paved with stones and roofed with slabs. Among the Bribri the roofing is in the form of a pent-house, but in the Cabeçar country it is flat and flush with the ground, the Cabeçar graves, moreover, are not paved. Each family possesses one of these graves.

To return for one moment to the question of burying the possessions of the deceased with him, it may be added that such seems to have been the habit of the early Talamanca, whose graves are rich in objects of stone, pottery, and even gold. No doubt other objects were also interred, but the perishable nature of their material, together with the dampness of the climate and the lapse of time, has caused their disintegration. It is worth noting that the Tiribi, until a comparatively short time before Gabb wrote his treatise,

destroyed all the property of the deceased which could not be buried, such as his live stock and fruit-trees. At the present time, however, these are divided among his heirs. While the body is lying in the woods the soul is supposed to linger about the neighbourhood, living on wild fruits. At the end of the year it is attracted to the funeral feast by the kindling of the sacred fire, and, when this is extinguished, it departs on its journey to Sibú, directions for reaching which it has just received from the chant uttered by the president of the feast.

It is said that the Bribri warriors who had fought in the war with the Tiribi, which is mentioned above (p. 92), were interred with special ceremonies, in which a masked and bearded figure made its appearance; but further details are not available.

The ancient Talamancan graves differ in certain respects from those just described. In the first place, individual rather than family burials seem to have been the rule; in the second, greater labour was involved in their preparation, since the roofing, which was situated below the ground level, was of stone, often in the form of large slabs. The ancient cemeteries which have been discovered are confined to the Pacific slope, and it may be that there was a certain amount of local variation in burial customs. The reason why our knowledge is so partial lies in the fact that the Atlantic watershed has not yet been explored from an archaeological point of view. The burials furthest to the north and west yet discovered are those in the neighbourhood of Buenos Aires, not far from Terraba, the most easterly and southerly, in the region of David and Remedios. The associated remains are quite homogeneous, though the graves differ locally in detail. The crowded state of the cemeteries bears witness to a large population, and from evidence provided by the early chroniclers it is evident that the country was

thickly populated at the discovery. Thanks to the researches principally of de Zeltner, Holmes and Mac-Curdy, the archaeology of the known cemeteries has been worked out more thoroughly than that of any other region with which this book deals. For details the student may be referred to the works of these authors, but, to speak generally, the character of the graves is as follows. All observers agree that two distinct types of grave occur, often in juxtaposition, the oval and quadrangular. The most minute classification

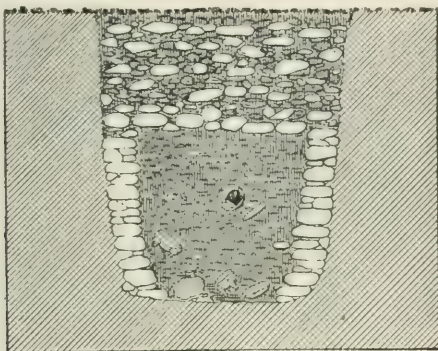


FIG. 26.—Section of Talamancan grave ;
oval type. *After Holmes.*

is that of de Zeltner, who enumerates six kinds of grave as follows:—

1. An oval cist (Fig. 26).
2. An oblong cist, walled and roofed with stone (Fig. 27).
3. A “fortified cist,” deeper than the preceding, the site of which is marked by five stone pillars arranged quincunx fashion.
4. Slab-roofed cists with four pillars, the walls being built up between the latter.
5. V-shaped in vertical section, without walls, a roof of earth, marked by a paving on the surface and a pillar

at each corner. This is described by him as the commonest type, but is not mentioned by other observers.

6. Long rectangular unlined graves, with a packing of river-stones above.

At Buenos Aires the presence of graves is in many cases indicated by mounds surmounted with circles of river-stones, though sometimes the only sign of a burial is a single stone pillar, which often does not project beyond the surface of the ground. Here the graves

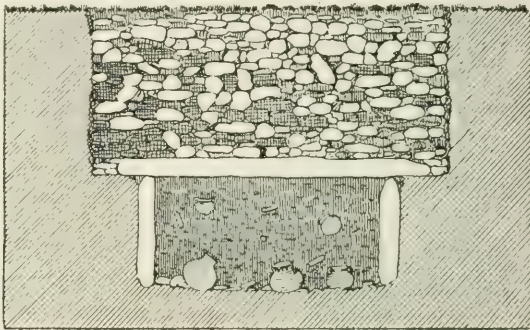


FIG. 27.—Section of Talamancan grave; oblong type.
After Holmes.

are unlined. At El Paso are two cemeteries forming regular hills, faced with river-stones; the graves lie from 4 to 15 feet deep, and are furnished with a niche at the bottom. These too are unlined, though a slab roofing is found in some cases. One of the best descriptions of a single cemetery, however, is given by MacCurdy. This is the important burial-ground at Bugavita, near Bugaba, of some 12 acres in extent and divided into two portions by a depression running from east to west and varying in width from 10 to 18 yards. In this cemetery both the oval and rectangular types of grave were found. The oval graves were discovered in

greatest numbers in the northern and western portion of the cemetery and were richest in gold and pottery ; they were lined with walls of cobbles to a height of about 3 feet from the bottom, and from this point to the surface of the ground the whole grave was packed with stones of a similar character. Most of the remains were found within the wall, and no bones were discovered in the cists, which were filled with a black loamy earth. The rectangular graves of this cemetery included two varieties. The first of these were lined with rounded stones to a point one-third of the distance from the surface, and from here the whole grave, as in the case of the oval type, was packed with similar stones. These graves were larger and yielded more gold than the second variety, and were found interspersed among the oval graves in the northern and western portion of the cemetery. The second variety consisted of vaults lined with slabs, and were most numerous in the southern and eastern section. In each case a grave-pit had been dug to a depth of some three feet, and then a smaller excavation had been made in the floor some two feet deeper. The latter had been lined and roofed with flat stones, and the space above entirely filled with ordinary river-stones. These graves were poor in relics, and little save pottery was discovered in them, but they showed more skilful workmanship and were better preserved. Owing to the disintegration of the human remains it is impossible to say whether the ancient Talamanca practised secondary burial like the Bribri and their neighbours. Some of the rectangular graves are large enough to contain a body at full length, but in the case of the oval graves, either secondary burial must have been the rule, or the body must have been disposed in a contracted position. As regards this question we can only suspend judgment ; the existence of secondary burial as a regular custom in later times might incline one to

infer that it was also the practice in the days before the discovery, were it not for the fact that the size of so large a proportion of the graves seems to support the opposite view.

The burial customs of the Guaymi, when they were first encountered by white men, seem to have been similar to those of the later Talamanca. The body was first deposited on a platform in the forest, and the bones were fetched a year later and deposited in a family tomb.

Among the Cueva the mortuary customs were very similar up to a certain point, but it is interesting to note that here cremation was practised. Andagoya gives an account of the ceremonies performed at the death of a chief, stating that the details as he describes them were actually observed at the decease of the Cacique Pocorosa (see the map, Fig. 25, p. 95). The body of the dead chief was decked with golden ornaments and wrapped in his richest cotton cloths. The heir and principal men then assembled and suspended the corpse by cords in the house, placing beneath several pans of lighted charcoal and two pottery vases to catch the grease. While it was drying it was watched continually by ten of the chief men, who sat round it night and day wearing black mantles which covered head and body. No one else was allowed to enter the hut, and from time to time one of the watchers would strike a series of slow strokes on a drum, this action being followed by a chant in monotone in which the principal actions of the deceased were enumerated. When the body was dry it was removed to the house of the new chief, where it remained suspended for a year. On the anniversary of the death a festival was held, the participants bringing contributions consisting of the various kinds of food which the deceased used to eat. At the conclusion of the feast the dead was burnt in a courtyard, together with his arms and

models of his canoes. It was stated that the smoke went to the place where his soul was, but the exact whereabouts of the soul itself was not specified. In the case of a rich chief the anniversary festival was renewed annually for several years, but this did not occur in the case of ordinary individuals, for there was much eating and drinking, and apparently the cost fell upon the estate of the deceased or his heir. It is not quite certain whether cremation was invariably practised; indeed Andagoya hints that the corpse was sometimes buried. For instance, he states that at the death of a chief, his favourite concubines (apparently not the legitimate wife) sometimes elected to be buried with him, and that the chief himself would occasionally point out the future victims before his death. It seems possible, too, from the account given by Peter Martyr, that the body when dry was sometimes kept indefinitely in the chief's house, as a sort of ancestral idol. I give his account of the "palace" of Comogre (see map, Fig. 25, p. 95) in full, in the quaint English of his translator, Lok: "But nowe you shall heare of a thing more monstrous to beholde. Entring therefore into the inner partes of the pallace, they were brought into a chamber hanged about with the carkasses of men, tyed with ropes of gossampine cotton. Being demaunded what they meant by that superstition, they answered that these were the carcasses of the father, graundfather and great graundfather of their king, *Comogrus*, declaring that they had the same in great reverence, and that they tooke it for a godly thing to honour them religiously, and therefore apparrelled every of the same sumptuously with gold and precious stones, according unto their estate. After this sorte did the antiquitie honour their *Penates*, which they thought had the governance of their lives. How they drye these carcasses upon certaine instruments, made of wood, like unto hurdells, with a soft fire under the

same, so that onely the skinne remaineth to hold the bones together, we have described in the former Decade." On the whole it is probable that among the Cueva tribes all three methods of disposing of the dead were practised. In all cases the body was first dried over a fire, and then was either buried, burned or preserved in the chief's house, according to the rank of the deceased and the local custom of the tribal group. The preservation of the dead, who thereby becomes a sort of family god, connects the beliefs of this people with those of certain South American peoples. This was the custom in Paria, and also under certain circumstances in Peru and the Antilles.

The Choco tribes in Dabaibe laid their dead in trenches or graves, at which "wine" and maize were offered annually. Further we are told that if a woman died in childbirth the infant was buried with her.

CHAPTER VI.—SOUTHERN COSTA RICA AND PANAMA (*continued*)

AS in Nicaragua, so throughout the whole of this region, food seems to have been plentiful and easily obtained. The natives possessed several food-plants of great importance, principally the plantain, yams, cassava (the root of the yucca or manioc) and maize. Flesh was eaten to some extent, though fish was a more important article of diet, especially among the coastal tribes, who exported it into the interior. How far the cacao-plant was known in early times is doubtful. It is cultivated by the later Talamancan tribes, but its introduction into this area may be comparatively recent. As we have seen, it was brought into Nicaragua by the Nicarao, a tribe of Mexican stock, and since a colony of Mexicans found their way as far south as Amirante Bay, they may have brought this, to them, almost indispensable article of diet into the Talamancan area. In all probability, however, it was not known to the tribes further east, though the rapidity with which plants of economic importance spread from tribe to tribe cannot be overestimated. In the cultivation of the fields no doubt the principal implement was the wooden digging-stick, similar to that used by the Bribri of later times. Among this people and their neighbours the planting of maize is performed by the men, and the crop is then left to itself, though the small boys are employed as "scare-crows" to drive off the parrots and wild pigs. The women assist in the harvest, and the grain is soaked, and ground on a board

with a stone. The resultant paste, sometimes mixed with mashed plantains, is boiled and formed into cakes. No doubt the practice of the early inhabitants was similar, though the ancient Talamanca employed stone metates for the grinding of the grain, of a pattern exactly similar to those of the Guetar as figured on Pl. VII, 2, p. 76. In particular the Guaymi seem to have cultivated a good deal of maize, since Ferdinand Columbus remarks on the large plantations seen in the region inland of the coast of Veragua. However, much of the maize-crop was devoted to the preparation of an intoxicating drink, as among the latter-day Talamanca. Here, after grinding, the paste is thinned with water, to which a little mashed plantain is often added, and the mixture is set aside in earthen pots to ferment. The process of fermentation is assisted by throwing into the liquor a little maize chewed in the mouth. This custom recalls the chewing of the kava-root among the Polynesians (see also pp. 39 and 213). The drink so prepared, called *chicha*, which is not very potent, is frequently mentioned by the early chroniclers writing both of the Guaymi and the Cueva. Ferdinand Columbus adds that two kinds of maize "wine" were manufactured in Veragua, a red and a white, made as beer is made in England. He also mentions a beverage made from the sap of the palm-tree boiled with water and flavoured with spice. The tough root of the manioc, called *yucca*, was grated and, after the juice had been expressed, was made into "bread." This food-plant was also found in the Antilles, where the sap of the particular variety cultivated was poisonous. On the mainland however it was said to be innocuous when boiled. In all probability the use of this important food-plant, our tapioca, spread from the southern continent. Peter Martyr gives an account of the method of cultivation observed in the province of Caramairi, between Cartagena and Santa Marta on the north coast of Colombia,

and it may be assumed that the same was practised by the Isthmians. This account runs as follows:—

“When they intend to plant this *Iucca*, they make a hole in the earth knee deepe, and rayse a heape of the earth taken out of the same, fashioning it like a square bedde, of nine foote breadth on every side, setting twelve trunkes of these rootes (being about a foote and a half long apeece) in every of the sayd beddes, containing three rootes of a side, so layd aslope, that the endes of them joyne in maner together in the center or middest of the bedde within the grounde. Out of the joyntes of the rootes, and spaces between the same, spring the toppes of the blades of newe rootes, which by little and little encreasyng grow to the bignesse and length of a man’s arme in the brawne, and oftentimes as bygge as the thygh: So that by the tyme of their full rypenesse, in manner all the earth of the heape is converted into rootes. But they say that these rootes are not rype in lesse than a yeere and a halfe, and that the longer they are suffered to grow, even until two yeeres compleate, thay are so much the better, and more perfecte to make breade thereof. When they are taken foorth of the earth, they scrape them, and flyse them, with certayne sharpe stones, serving for the same purpose. And thus laying them betweene two great stones, or putting them in a sacke made of the stalkes of certayne tough hearbes and small reedes, they presse them (as we doe cheese or crabbes, to drawe out the juyce thereof) and so let them dry a day before they eate them.”

Before leaving the subject of vegetable foods it is worth while noting that Ferdinand Columbus mentions that a certain Cacique, met on the coast of Veragua, and his chief men were continually chewing “a dry herb,” sometimes mixed with a “sort of powder,” and that their teeth were “decayed and rotten” (probably merely discoloured). What the herb was we do

not know, but the practice recalls the chewing of the coca-leaf which was so prevalent in Peru ; it may however have been tobacco. Among the food-animals may be mentioned deer, agouti, pig, various birds and the iguana. Game seems to have been plentiful, and we are told that even on the Pearl Islands there were "plenty of harts and conies (agouti)." In the Guaymi region pigs were driven into nets of nequen cordage and despatched with spears, while the Cueva chiefs possessed rights over certain hunting-grounds where the game was driven by firing the bush in summer, the hunters lying in wait in their path. In the territory of the chief Peraquete (see the map, Fig. 25, p. 95) we hear that harts and boars were taken in pitfalls, while doves and other birds were attracted by means of a tame decoy and either shot with arrows or captured by means of nets. Decoys were also used for parrots, the hunter taking up his position in a tree, and snaring by means of a noose the birds which were attracted. Another important food-bird was the curassow. Meat not intended to be eaten at once was "barbecued." As stated above, this process combined cooking with drying, the meat being placed on a wooden framework over a slow fire, and in the full rays of the sun. Fish was also treated thus, and the chiefs usually kept considerable stores of food by them for ceremonial feasts and for the supply of their villagers when they were engaged upon public works. Thus, when the Spaniards first visited the residence of the Cacique Comogre, they found that he possessed many store-rooms which were filled with provisions, such as "bread" (probably prepared manioc), deer-flesh, and maize-beer and other fermented drinks.

Fishing was an important industry, even more so than hunting, and provided the staple food of the coastal population. The methods employed were probably much the same among all the tribes, and those

described by Ferdinand Columbus as practised on the Atlantic coast of Veragua may be taken as typical. Here fish were taken in nets and also by means of turtle-shell hooks, cut out by sawing with a stout thread, probably moistened and dipped in sand. Certain small fish, which made their appearance in swarms, were captured in fine nets or mats, wrapped in leaves and dried by the fire. Thus treated they could be stored for a considerable time. A small river-fish, described as a "pilchard," was taken by another method. A canoe was provided with a screen erected longitudinally from stem to stern, and was propelled slowly along the stream; meanwhile as much noise was made as possible, and the bank was beaten with the paddles, so that the fish, leaping in terror from the water, struck against the screen and fell into the bottom of the canoe. Shell-fish, particularly oysters, were an important article of food, especially on the Pearl Islands.

The tribes of Talamanca, Guaymi and Cueva stock were not addicted to cannibalism; but the practice was not unknown in the eastern portion of this area. To the north and east of Biru were two immigrant "Carib" tribes under chiefs of the names of Capusigra and Tamasagra, who were credited with the practice. These tribes appear to have forced their way into the Cueva region from the southern continent.

Salt is always an important commodity among primitive peoples, and in this region it appears to have been collected from lagoons. The chief of Escoria, the southern neighbour and foe of the chief of Nata (see map, Fig. 25, p. 95¹), was lord of important sea-salt

¹ The early map-maker appears to have made a mistake as to the real sites of Nata and Paris, which are usually supposed to have been situated, not on the promontory of Chame, but further to the west, on the far larger promontory composed of Asuero and part of Veragua. The Nata of the present day is shown on the map at the end of the volume, and is generally thought to be identical with the ancient Nata.

deposits, and no doubt exported this desirable article in considerable quantities to his less fortunate neighbours.

The food-tabus observed by the fighting-men of this district have already been mentioned (p. 99).

Of the habitations in which the early tribes of this area lived, we possess no very detailed descriptions. It seems clear that, for the most part, they were constructed of perishable materials and that stone entered very little into their composition. In fact, over large tracts of this part of America no stone suitable for building purposes occurs, as the early Spanish colonists soon found. No remains of stone-built edifices have been discovered, and it is with surprise that one reads in Ferdinand Columbus how at a place called Catiba, on the Veragua coast, there was seen a "great mass of wall or imagery that to them seemed to be made of lime and stone." What this can have been it is impossible to conjecture, but at any rate stone did enter as accessory material into the composition of some of the more important dwellings in eastern Panama. For instance the great "palace" of Comogre, 150 paces long by 80 broad, was founded on great logs, the lower part of the walls being built of stone, the upper of woodwork curiously interwoven. Of the buildings of the early Talamanca we know nothing; the Bribri of later times live in circular houses, 30 to 40 feet in diameter, with a palm-leaf roof, the apex of which is about the same distance from the ground and surmounted with a pot. The house is entered by a single door. Occasionally another type of building is seen, viz. oblong with rounded ends and ridged roof. The Tiribi dwellings are oblong open sheds. The Cabeçar formerly constructed huts on the same pattern as the Bribri, but their present abodes are mere lean-to shelters, open on three sides. The modern Guaymi live in houses of similar materials, viz. walls of reeds and bamboo and roofs of palm-leaf thatch: every

house is divided into a number of apartments, one for each adult member of the family. Allusion has already been made to the great house of the Cueva Cacique Comogre, and it must be added that edifices of this size were evidently not uncommon in this part of the country. The Cacique Tubanama, on the Pacific side (see the map, Fig. 25, p. 95), to mention another instance, possessed a house measuring 120 by 50 paces. In the Cueva country villages were not large; each Cacique had several houses, three or four or even more, grouped round his "palace," while the ordinary individual built his dwelling on the land which he cultivated. Many of the chiefs, such as Comogre and Pocososa, owned settlements on the seashore as well as their principal establishment a little way inland, and thus were able to ensure a plentiful supply of fish. The fortified villages of the Guaymi on the Pacific coast have already been mentioned (p. 100).

Hammocks and stools appear to have been the principal articles of furniture throughout the whole region, from Talamanca to Cueva.

The inhabitants of this area were certainly not embarrassed by a superfluity of clothing. At the Discovery, the men of the Talamancan tribes appear habitually to have gone nude, while the dress of the women consisted merely in a cotton loin-band or "truss." However, many of the gold figurines from Talamancan graves show male figures wearing a small apron, and the pottery figure illustrated in the Frontispiece is obviously clad in a regular short skirt ornamented with patterns in red and black. Further, he wears a head-cloth, and apart from feather ornaments no head-covering was noted by the early explorers except on the Veragua coast, where large leaves were used as a protection from the sun and rain. In times subsequent to the conquest, Bribri men wore a bark-cloth skirt and women a breech-cloth of similar material

with, in some cases, a sleeveless tunic. At the present day their garments are almost invariably made of cotton. The early Guaymi, in the region of Paris, Escoria and Nata, and also apparently on the Atlantic coast, observed somewhat similar customs as regards clothing. That is to say the men went nude and the women wore a short skirt. These garments may have been of cotton, but most probably were often of bark-cloth, since among the modern Guaymi the men wear a simple loin-cloth of this material and the women a somewhat longer petticoat descending to the knee; a long sleeveless mantle, also of bark, is worn by both sexes when it rains.

Among the Cueva the clothing of the women, at any rate, was a little more extensive. For the most part they wore a skirt reaching from the waist to the ankle, while the men were nude except for a shell covering secured by a cord passing round the loins. The latter peculiar form of dress was not however universal throughout the Cueva region; it is recorded of the region behind Porto Bello, known as Xaguaguara (see the map, Fig. 25, p. 95), of Peraquete, and again of the district extending from Comogre over Acla to Santa Maria Antiqua de Darien (called simply "Darien" on the map). But the inhabitants of Pocorosa's country and certain of the neighbouring tribes dispensed with this ornament altogether, and it seems probable that it was of South American origin. At any rate, a similar covering of gold was worn by the Choco of Dabaibe, and the men of Paria (in Eastern Venezuela) wore the same kind of "garment," but made of gourd or tortoise-shell. Paint was freely used as face- and body-ornament by all these peoples, the chief colours being black, red and white. *Many of the figurines of the Talamancan area are ornamented with patterns which may well be intended to represent this form of adornment, and the different designs may have been significant as indicating

rank or clan. At any rate in the Xaguaguara region, so Peter Martyr tells us, the Cacique was ornamented with black paint and his chief men with red. Certain of the Talamancan tribes, and perhaps the Dorasque, practised regular tatuing. The author just quoted states that in the region of Coiba Dites, where there was a Cacique of the name of Juana, tatued slaves were found. Their faces had been punctured with a bone needle or a thorn, a certain powder sprinkled on, and then moistened with a red or black vegetable juice. These men however were prisoners of war and therefore presumably not inhabitants of the neighbourhood. Coiba Dites was the name first given to the country lying behind the Chiriqui lagoon. The practice of tatu survived until comparatively recently among the Tiribi, who ornamented their faces and arms by this means. The Bribri and Cabeçar however deny that the custom was ever current among themselves. Cranial deformation was not practised by any of the peoples, and mutilation was limited to the piercing of the ears and nose for the reception of ornaments. Guaymi women in modern times usually knock out the upper canine tooth on the left side at puberty, but it is not known whether they did so in earlier days. Of the forms of hair-dressing we know practically nothing; beards were not worn by the men, and the scanty face-hair was probably removed by means of small copper tweezers or a bivalve shell. Tweezers of the type common in Peru, where we know they were used for this purpose, have been found in a few of the ancient Talamancan graves. Personal ornaments appear to have varied little throughout the whole area, and seem to have been made principally of gold. Objects of bone and shell are not common in graves, but then the climate and soil are not favourable to their preservation. Coronets of gorgeous feathers were worn on ceremonial occasions, and beads of stone, cylindrical or barrel-shaped, are occasionally

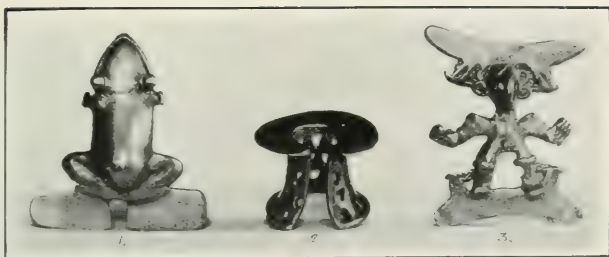
found in Talamancan graves, and also stone "amulets," which must have found their way hither from Nicoya (see Fig. 11, p. 59). When Columbus arrived at the Bay of Cerebaro, the later Bahia del Amirante, the natives were seen adorned with garlands of flowers and crowns of puma and jaguar claws, while some wore in addition neck-ornaments of base gold in the form of "eagles, lions and other beastes and fowles." The latter have been found in great numbers in the Talamancan burials, and in later days, at any rate, were worn as the *insignia* of Caciques practically throughout the whole area. Besides the animal-figures, gold discs, plain or adorned with embossed designs, and tubular gold beads, made of a small plate rolled up, have also been discovered. In the Veragua region, the plunder taken from the house of the Cacique Quibio on the Belen river included "gold plates, little eagles and small quills, which they string and wear about their arms and legs, and . . . gold twists they put about their heads in the nature of a coronet." Further east, in the district of Xaguaguara, the travellers met a Cacique who, together with seven of his principal men, wore gold plates suspended from the *septa* of their noses and reaching down to their lips, "which they take for a comely ornament." Again, on the west side of the Gulf of San Miguel many gold ornaments were collected, in the shape of bracelets, collars, ear-rings, breastplates, helmets, and "certaine barres wherewith women beare up their breastes." The last have not been identified among any of the gold objects which have survived until the present time. The quantities of gold collected by the Spaniards in early days were very large, and the name Castilla del Oro was given to Panama in consequence. The natives parted readily with their ornaments in exchange for all sorts of trifles, and we read of very rich plunder, for it was little else, being obtained all along the coast from Cerebaro

to Darien. Thus the various presents, consisting of personal ornaments, given by Comogre to Vasco Nuñez de Balboa amounted in all to 1500 lbs. of 8 ozs. to the lb.; and near Santa Maria Antigua, Enciso found a treasure, hidden in pottery vases by the Cacique Cemaco, the value of which worked out at £2500. On the Pacific coast too, especially on the shores of the Gulf of San Miguel, gold was found in almost equal abundance.

In modern times the ancient burial-grounds of the Talamanca have yielded a very large amount of the precious metal; indeed it is estimated that from the twelve-acre cemetery of Bugavita, near Bugaba, gold to the value of not less than ten thousand pounds sterling has been collected. Unfortunately most of this has been melted down, and only a comparatively small number of the figures and other ornaments from the graves has found its way into museums. Squier remarks that he was "informed by the late Governor of the Bank of England that several thousand pounds' worth were annually remitted from the Isthmus as bullion to that establishment."

As regards the objects themselves, a number of motives occur. Figures in the shape of birds, frogs and fish are the most common, but anthropomorphic creatures with the heads of alligators, jaguars, deer and parrots are frequently found (Pl. XIII). Sometimes the figures are free, such as the birds on Pl. XIII, 4 and 6, one of which is represented as holding a snake in its beak and talons. In other cases they are enclosed in an ornamental frame, as the fine pendant on Pl. XIII, 7, which shows a regular orchestra composed of eight men playing whistles and ocarinas. Monkey forms are also found, and MacCurdy figures an interesting specimen representing a sort of crab-man, with the human and animal elements combined exactly in the same manner as in a well-known painted design which often occurs

upon the early pottery of the Truxillo district of Peru. Many other figures show a combination of animal elements, such as the alligator-headed specimen on Pl. XIII, 5, which has two snakes issuing from its head, and also the parrot-headed figure on the same plate (Fig. 3). Foil plaques are also found, sometimes plain, sometimes with human features in relief or ornamental bosses. The quality of the gold of which these objects are composed is very variable; in most cases it is alloyed with copper, and specimens are found which exhibit every degree of alloy from nearly pure gold to nearly pure copper. How far the alloy is natural or artificial is a doubtful question; on the whole it seems more likely that it was the former, since, as some process analogous in effect to gilding was known, there was no need to construct the entire figure of more or less pure gold. A small percentage of silver is often found, but the presence of this must be accidental, and no objects of this metal have been discovered. The technique of the gold figurines is extremely interesting. In a few cases a nugget of a convenient shape has been modified slightly by hammering to form a figure, but these are not typical. Usually the figures present the appearance of having been made partly of plate and partly of wire details, the latter soldered on. Examination shows, however, that this is not the case, there is no trace of solder, there is no tendency of the "wire" elements to part along their contact surfaces, and sections show that the metal is homogeneous throughout. Defects appear in the "wire" which could hardly be possible in wrought gold. Moreover, no matter where one of these figures be broken, it shows a rough granular fracture, and all unpolished parts exhibit the pitted surface characteristic of casting. At the same time it is perfectly evident that the model was built up of some plastic material, and we are therefore forced to the conclusion that casting by the



COSTA RICA AND PANAMA
GOLD ORNAMENTS: TALAMANCAN
(Scale: 1—3, 1/2; 4—6, 1/3rd; 7, 1/4th)

PLATE XIII

cire perdue process must have been the method employed. This was known to the ancient Mexicans, and the process as practised by them is described in full by Sahagun.¹ At the same time it would seem that certain portions were finished by hammering, such as the broad flat feet of frogs and the wings of birds, and indeed marks such as would be left by the hammer may sometimes be seen on the reverse surface. It is noteworthy that small figures in a reddish resin, which are carved in the technique of the gold objects, are sometimes found in the graves; it is possible that these may have been models intended for casting. Most of the figurines are cast hollow with a slit at the back, and in the cavity traces of resin are frequently found. All important surfaces were carefully burnished, and a large percentage of specimens occurs in which the figurines composed of a gold-copper alloy, often rather base, present a polished superficial film of practically pure gold. The question of gilding is of great interest, and has given rise to a great deal of conjecture. A very plausible suggestion is that the models were covered with gold leaf before casting, but we do not know that the natives were capable of beating gold so thin that it would readily assume all the outlines of a complicated wax model. Moreover, in some cases the film of gold is so thin as to resemble electro-plating. A persistent and early report concerning the gold-working of the Antilles and of Colombia (and in the latter country the objects in this metal exhibit the same technical qualities) states that the surface of an alloy was treated with the acid juices of certain herbs which dissolved out the copper and left a superficial coating of purer gold. The possibility of this has usually been denied, but some experiments were made by Mr. O. H. Evans, and his results were so interesting that I give them

¹ See *Mexican Archaeology*, pp. 144-5.

here.¹ It appears that modern goldsmiths employ a chemical process to improve the apparent quality of gold, the most common involving the use of hot salts. Mr. Evans, experimenting with dilute nitric acid, found that a black lustrous film was produced on the surface of a base alloy, which, when annealed by heating out of contact with the air, became yellow and could easily be burnished with a quartz pebble. Further experiments with organic acids and acid plant-juices "fully answered expectations." Of the organic acids few gave such good results as urine, which rapidly covered the surface with a coat of hydrated copper salt soluble in plant-juice. With these natural reagents, it is true, the operation is very tedious, and, in the case of base alloys, months are required to produce a film thick enough to burnish. At the same time we know that time is absolutely no object to a primitive people, and the labour involved in any process cannot be quoted as evidence against its use.

The gold of which these ornaments and figures were made was obtained locally. Columbus found that the inhabitants of the districts Cerebaro and Aburema, occupying the western and eastern shores of the Bahia del Amirante, possessed large quantities of this metal, and that whole villages were occupied in the gold industry. In Veragua gold was regularly sought in the mountains inland, and the mines of the Cacique Quibio on the Belen river² were locally famous. In eastern Panama the gold was obtained by dredging with baskets in the rivers, or was scraped out of the banks of dry watercourses, and was washed out of the sand by means of water in calabashes. The gold-trade was extensive, though no doubt it assumes an exaggerated

¹ See *Note on the Gilded Metal-Work of Chiriqui*, "Nature," Vol. LXXXII, p. 457.

² For this and the succeeding names of Caciques and localities, see the map, Fig. 25, p. 95.

importance owing to the fact that it was the only form of native commerce concerning which the Spaniards took any trouble to enquire. Thus gold was exported from Cerebaro to Cariari in the Rama territory, and no doubt the gold figures discovered in Nicaragua came from the Talamanca region. In eastern Panama, the chief Comogre obtained the precious metal from the inhabitants of the mountains in the interior, and from the south, in exchange for cotton cloth and slaves; while the Cacique Cemaco imported it from the same quarter in return for cloth and cassava bread. The tribes of the Pacific coast also exported gold to the Atlantic side, and some of them, notably Tubanama, imported it from the south. This points to the region of Dabaibe or even Colombia, as constituting at least one of the sources of the gold-supply for the eastern region. While on the track of the gold, the early Spaniards discovered what appear to be definite indications that the coast of the southern continent, at least as far as Ecuador, and probably as far as northern Peru, was known to the Cueva. When Balboa quarrelled with one of his companions over a present of 4000 oz. of wrought gold given him by Comogre, one of the Cacique's sons overturned the scales, saying contemptuously that if they set so great store on so small a quantity, let them travel south-west, to a Cacique Tubanama, and on to a great sea where there were large ships with sails and oars. Here they would find all the gold they wanted. The mention of sails is interesting, since on this side of the continent they were only found off the coast of Ecuador. Later, when the Spaniards reached the territory of the Cacique Tumaco on the Pacific coast, they heard the report of a great country, very rich in gold, which lay to the south, where the inhabitants used certain animals to carry their burdens. Tumaco made a model of one of these creatures in clay, and the Spaniards marvelled, "some said it was a lie, others thought that they were camels, others

that they were deer or tapirs.”¹ In the light of later knowledge it is difficult to see what this animal could have been but the llama, which was used in Peru and Ecuador to carry burdens, being indeed the only beast of burden on the whole continent. In Biru, further south, information concerning the southern continent became even more precise, and Andagoya states that they received accounts “concerning all the coast and everything that has been (since) discovered, as far as Cuzco; especially with regard to the inhabitants of each province, for in their trading this people extend their wanderings over many lands.” Of other forms of trade, besides that in food, may be mentioned the export, from Acla inland, of the shells used by Cueva men as a covering, and the pearl-industry. The pearl-fishery was chiefly in the hands of the Cacique Tumaco on the mainland, and of his enemy, the chief who ruled over the Pearl Islands. The oysters were gathered by divers, and were cooked before being opened, since they constituted an important article of food. The process however tended to discolour the pearls. Although it was not the proper season for gathering the oysters, Tumaco, to oblige the Spaniards, sent a number of men to dive in the shallower water, and as a result 96 oz. of pearls were collected in four days. On the Pearl Islands, where the pearls ran larger, the Spaniards received at one time a basket containing 880 oz. of pearls as a gift from the chief. From Tumaco the pearls passed by exchange inland, reaching as far, at least, as Comogre.

¹ “Dijose que aquel Cacique Tumaco dio nuevas a Vasco Nuñez, como por aquella costa en adelante, señalando hacia el Peru, habia grande cantidad de oro, y ciertos animales sobre que ponian sus cargas las gentes della, y que de barro hizo una figura como las ovejas de aquella tierra, con el pescuezo que tienen, que parece proprio de camello; estaban los españoles admirados, dellos decian que mentian, dellos pensaban si eran camellos, dellos si eran ciervos o dantas.” Las Casas, *Historia General de Las Indias*, chap. xlj.

As regards other crafts, the spinning and weaving of cotton seem to have been practised by some of the tribes, and, as has been mentioned, cotton cloths constituted an article of trade. None of these textiles have survived, but it is likely that they were ornamented with patterns in colours, probably painted on, or possibly applied with stamps. A few pottery stamps which might have served this purpose have been found in Talamanca graves.

The coastal natives were expert watermen, though their only craft were dug-out canoes; as swimmers they were unrivalled, and Ferdinand Columbus relates how, when a canoe was pursued at Porto Bello, the occupants took to the water and could not be captured owing to their skill in diving.

CHAPTER VII.—SOUTHERN COSTA RICA AND PANAMA (*continued*)

AS for tools and implements, it is questionable how far bronze was ever employed. Objects of an alloy, almost certainly natural, of copper and tin have occasionally been found in Talamancan cemeteries, but I am unaware that any axe-blade or other implement of this material has been discovered. However Columbus received a report on the coast of Veragua that there were many copper mines in the country inland, and that copper axes and other objects were made, both cast and soldered. The Cueva certainly seem to have known no metal other than gold, and Peter Martyr tells us that Balboa gave the Cacique Poncha some iron axes, “ Because they lacke Iron and all other mettals except golde, by reason whereof they are enforced with great labour to cutte their trees, to builde their houses, and specially to make their boates holowe with certayne sharpe stones which they finde in the ryvers.”

The stone axes of the Talamancan area are for the most part similar to the types found in the Guetar region (see Fig. 19 *a* and *c*, p. 79). One specimen of the serrated type (Fig. 19 *b*) has been discovered at Buenos Aires, and no doubt was imported. A few different types however have been unearthed in the burial-grounds around David, including long polished celts, one of which is shouldered (Fig. 28 *a* and *c*). Polishing stones or burnishers occur in some quantities, and a pestle form of rubbing-stone is not unknown (Fig. 28 *b*). Chipped arrow-heads, formed of a single flake with worked edges, triangular or trapezoid in section, also

occur (Fig. 29), as well as spear-heads which differ only in size from the arrow-heads. Both are of the tanged variety, and the points of the spear-heads are sometimes polished. The celts are usually made from a fine-grained volcanic tufa, the arrow-heads from a flinty jasper, and the polishing-stones from jasper or chalcedony.

Metates are found in some numbers, and the finer specimens resemble almost exactly the jaguar-types of

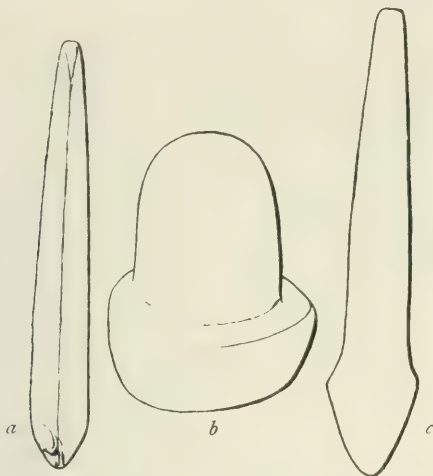


FIG. 28.—*a* and *c*, stone celts; *b*, stone pestle.
Yale University. After MacCurdy. Scale $\frac{1}{8}$.

the Guetar highlands (see Pl. VII, p. 76), though they are sometimes more highly ornamented. They are constructed from andesitic lava, and in their simplest forms are merely flattened boulders. The first stage of elaboration consists in heightening and hollowing the base (Fig. 30), or carving three legs in relief, but usually no further ornamentation is added to these simple types. Stools of the patterns found in Guetar cemeteries (such as Pl. VII, 4, p. 76) also occur in some numbers, as well as the form illustrated on

Pl. III, 1, p. 54. On the same plate is shown a stool made of pottery in the form of one of the types mentioned above. The caryatid stools usually present human, monkey or jaguar figures, and no doubt were

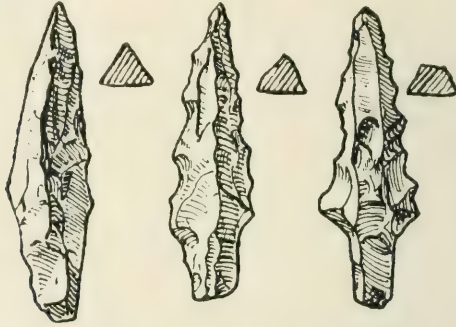


FIG. 29.—Stone arrow-heads. *Yale University.*
After MacCurdy. Scale $\frac{1}{4}$.

much prized, owing to the labour involved in their production. This appears from a specimen figured by MacCurdy, in which the arm of a monkey-figure has been broken and replaced by another arm subsequently carved in relief across the body. As has been seen (p. 93), it was

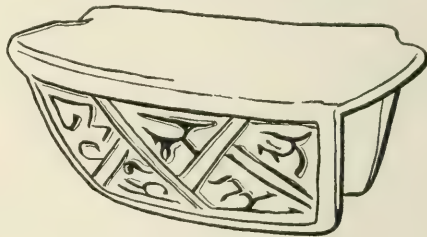


FIG. 30.—Stone stool. *Yale University.*
After MacCurdy. Scale $\frac{1}{3}$.

regarded as suitable that a chief should have a seat, and no doubt in early times these stools were used by Caciques and important individuals. Stone images are not very common in the David area, though more often found on the Rio Grande near Buenos Aires. They are

usually rude, and represent human females; the arms are generally indicated in relief, and are rarely carved free. At the Rio Grande sites, jaguar, armadillo, monkey and alligator forms are found, but where they occur pottery is rare, while at Buenos Aires pottery is common and stone-work is infrequent. Miscellaneous stone objects include cylindrical and barrel-shaped beads with bi-conical perforations, as well as a few "amulets" in bird-form and jadeite plaques which have evidently been imported from Nicoya. As might be expected, such objects are more common at Buenos Aires than in the David district.

Of the pottery more could be written than of any other class of remains, though the account would touch only the ware of the Talamanca district. Talamancan or "Chiriqui" pottery has been carefully studied by Holmes and MacCurdy, the former of whom evolved an excellent classification which was slightly amplified by the latter in the light of further material. Those who wish to study the subject in detail, and a fascinating subject it is, may be referred to the works of the authors in question.

To speak generally of forms, Chiriqui pottery exhibits a wide range, from plain bowls, obviously based on gourd-shapes, to tripod vases with necks and a rounded lip (Fig. 31 foll.). Intermediate between these extremes come tripod bowls (in some of which the sides make a distinct angle with the bottoms), round-bottomed vases with a projecting rim, or with a vertical or flaring neck surmounted by a lip, vases with twin mouths, and similar shapes mounted on tripod feet. Handles frequently occur, disposed vertically and connecting neck and shoulder, or horizontally and placed on the shoulder alone. Vertical handles are usually paired, and sometimes formed of two twisted strips of clay, and occasionally a single basket-handle is seen, crossing from side to side of the mouth. Pots in animal form are not very

common, but when found are usually provided with four feet. The legs of tripods are usually hollow, containing a rattle, and by the addition of *appliqué* details are made to assume some animal or human form or derivative; similar *appliqué* details occur as ornament to the bodies of vases. Slip is frequently employed as an ornament, partially or wholly covering the vessel, and painted designs occur on a great number of the vases. These designs are usually derived from animal forms. Where colour appears in ornamentation it is usually red, salmon-coloured, black, cream or purple, the latter being rare. Incised patterns also occur on some classes of ware. The paste varies considerably from very fine terra-cotta or cream-coloured, to a coarser red, chocolate or nearly black. In the finer vases both moulding and firing is extremely good. Holmes and MacCurdy, in their respective classifications, divide Chiriqui pottery into two main groups, painted and unpainted, and these again into sub-groups as follows:—

A. Unpainted.

1. Biscuit or Armadillo ware.
2. Black Incised or Serpent ware.
3. Salmon-coloured ware.
4. Handled ware.

B. Painted.

1. Scarified ware.
2. Chocolate Incised ware.
3. Handled ware.
4. Tripod or Fish ware.
5. Maroon-coloured ware.
6. Red Line ware.
7. White Line ware.
8. Lost Colour ware.
9. Alligator ware.
10. Polychrome ware.



FIG. 31.—Types of Talamancan pottery. *Yale University.*
After MacCurdy. Scale $\frac{1}{2}$.

As MacCurdy remarks, the distinction between the main groups is not so sharp as that between sub-groups, since so many forms are common to both.

The armadillo ware, so called from the fact that this animal provides the principal (though not the only) ornamental motive, is from the point of view of form

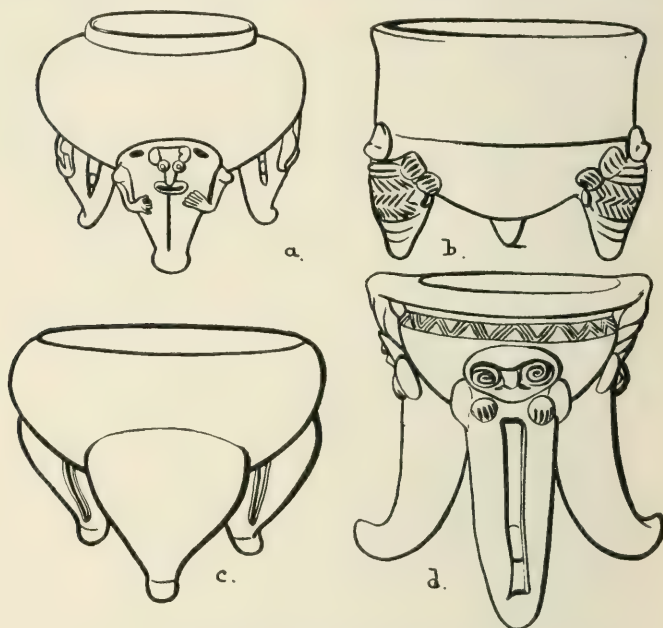
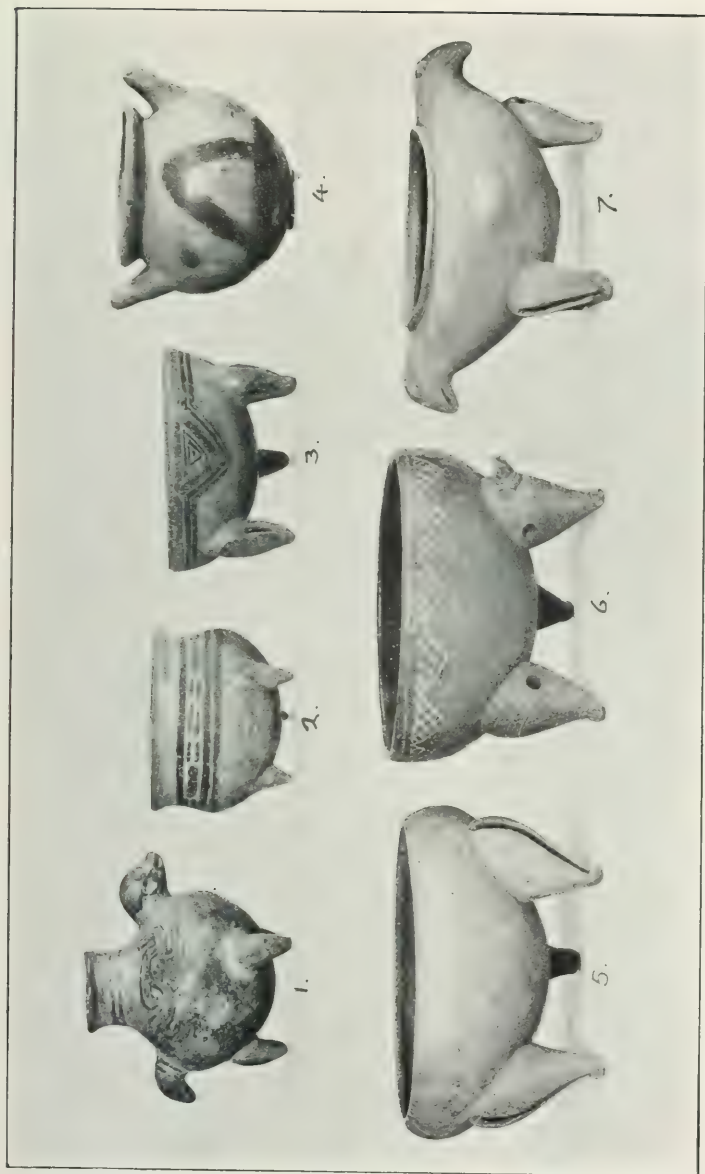


FIG. 32.—Types of Talamancan pottery. *Yale University.*
After MacCurdy. Scale a-c, $\frac{1}{2}$; d, $\frac{1}{4}$.

and technique almost, if not quite, the finest ware produced in the aboriginal America. The paste is pale greyish yellow or terra-cotta, and the walls uniformly thin and well-fired. The tripod form is the most common, but round-bottomed vases are nearly as numerous. A number of typical shapes is shown in Figs. 31 and 32 and Pl. XIV, 5 and 7. The ornament, where present, is invariably in the form of applied details, most



COSTA RICA
TYPES OF TALAMANCAN POTTERY; BUENOS AIRES
(Scale: 1/5th)

commonly representing, or derived from, the armadillo. Thus Fig. 32*b* shows a tripod bowl with legs in armadillo form, while Fig. 31*d* illustrates a vase with lugs representing the head of this animal, each with a forefoot on either side. Various parts of the creature are taken and used separately as ornamental motives. Thus, Fig. 33 shows a typical armadillo figure from a pot. By comparison with this it will be seen that the vase-neck in Fig. 34*a* is decorated with motives derived from its tail and eyes, while that in Fig. 34*b* is ornamented with details representing the bands of its carapace and its feet. Figures of the same animal, or its derivatives, appear often as vertical handles, connecting neck and shoulder, or as ornamental knobs, and in some cases anatomical details are misplaced; for instance occasionally where the head appears as a lug, the bands of the carapace are



FIG. 33.
Relief detail, representing the armadillo from a Talamancan vase.

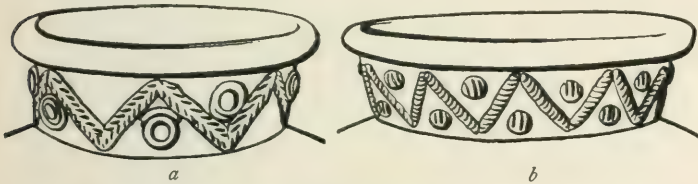


FIG. 34.—Talamancan vases, showing armadillo-motives.
After MacCurdy.

applied to the animal's chest. Other life-motives also occur, human figures, usually more or less grotesque (Fig. 31*b*), monkeys, birds and frogs (Fig. 31*c*) being the most common.

The serpent ware is not nearly so good in technique; it is not very common, and the pots are usually in vase-form with rounded bottoms and sometimes paired vertical handles on which armadillo motives appear. The paste is coarser than the last, and varies from dark

brown to black; the principal ornament is incised, and often filled with white pigment. As the name of this class implies, the decoration consists in motives derived from the serpent. One of the most naturalistic instances is shown in Fig. 38*f*, but more commonly the animal's head is lacking, and the body, with its characteristic markings, appears in the form of bands, triangles, and other geometrical designs.

The salmon-coloured ware, which also is less common than the armadillo, is practically differentiated from that class only by the presence of a salmon-coloured



FIG. 35.—Talamancan pottery; *a*, “scarified” ware; *b*, “red-line” ware. Yale University. After MacCuray. Scale $\frac{1}{2}$.

slip, often well burnished. In this class vases with flat bottoms have been observed.

The unpainted handled ware is represented by a large number of specimens. The paste is, on the whole, coarser than the armadillo, the walls thicker, and the shapes less pure in outline. The handles are usually paired, and are placed vertically (as Fig. 31*b*), or horizontally (Fig. 31*a*), and frequently take the same shapes as those characteristic of the armadillo class. This ware is especially common at Buenos Aires, it usually shows a certain amount of blackening by smoke, and the feet of tripods consist for the most part of small solid cones.

The scarified ware constitutes a very small class, and includes a number of rather unusual shapes. The paste

is thick and rather coarse, and the vases are usually furnished with short tripod feet placed close together. The distinguishing feature of this class is the ornament, consisting of panels filled with series of fine incised lines scratched in the pale paste, the rest of the body being covered with a uniform coat of maroon pigment (Fig. 35a).

Of the chocolate incised ware but few specimens have been found, consisting of small tripod bowls and vases,

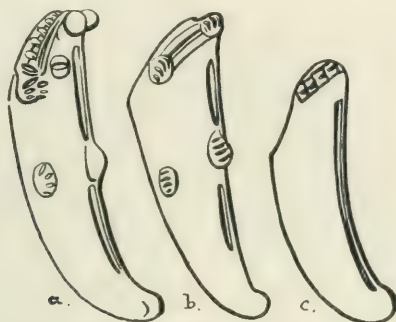


FIG. 36.—Legs of tripod vases, showing degeneration of fish-form; Talamancan. After MacCurly.

well-formed, with thin walls, and covered with a chocolate slip in which geometrical designs arranged in panels have been scratched.

The painted handled ware resembles in its main characteristics the unpainted, with the addition of designs applied in red pigment (Pl. XIV, 4). These designs usually consist of encircling bands, with two or three loops or triangles rising to the neck, or a series of daubs and short streaks. Applied ornament is not perhaps so common as in the unpainted variety, but is of similar character, and very occasionally incised designs occur also.

The tripod or fish class is similar to the last in paste. The most common form consists of a shallow

bowl with a rim, paired vertical twisted handles, a band of incised ornament round the "neck," and three rather widespread hollow feet (Fig. 32*d*). The paint is applied to the body in spots and bands, which have been rubbed down while drying, and so produce a "clouded" effect, and the interiors are perhaps more often decorated in this way than any other part. The



FIG. 37.—Talamancan vase; "Lost-Colour" ware.
Yale University. After MacCurdy. Scale $\frac{3}{8}$.

legs show a variety of forms, but the most common is that of the fish, in many stages of conventionalization. Fig. 36 illustrates the process by which the animal degenerates beyond recognition, and though, in the lowest stage here shown, the projection representing the dorsal fin has disappeared, it is usually the most persistent of the features, surviving sometimes even when the addition of appliqué details has transformed the leg into another animal shape. These other shapes include human, bird (Fig. 32*d*) and frog. In the Terraba region,

tripods belonging to this class have been found, of which the legs are approximately perpendicular and the body more ovoid, recalling certain of the Guetar tripods.

The maroon-coloured ware is remarkably similar to the scarified, though of rather better quality.

The red- and white-line groups are represented by but few specimens; the workmanship is poor as a rule, and the decoration artistically unimportant. In the red-line pots the paste is greyish orange, covered with a similar slip on which geometrical designs are painted in bright sienna red. Where tripod legs are present they are invariably looped (Fig. 35*b*), and annular bases also occur. The white-line pots have as ground-tint a dull red, on which bands or broad lines are painted in white. Animal features occur in relief, similar to those on other classes of ware.

The lost-colour group provides what are, to speak technically, the most interesting of the painted vases. The paste varies from buff to red, the walls are rather thick and badly-finished on the interior. The wide-mouthed bottle-forms (which constitute the most common type) have, to judge from broken specimens, been moulded in two pieces and then put together, the joint being smoothed over inside with a stick introduced through the mouth. A few tripod bowls are found, and whistles in animal form; handles are rare, and so are animal-motives in relief. In ware of this class the pot has usually been covered with a red or cream slip (rarely salmon), or both, and then a design painted on in wax. The whole pot has then been covered with a black pigment, and subsequently boiled. By this process the black is removed from the waxed portions, and the design appears reserved in the ground-colour. In some cases where the prevailing colours are red, cream and black, this process has been carried out twice. Monkey-forms are not uncommon as patterns (see Fig. 37), but geometrical forms are more frequent, some of which

appear to be based on textile art (Fig. 38*e*), while others are taken from the alligator (as will be seen later) and the octopus. At least as regards the latter animal, the



FIG. 38.—Talamancan pottery; *a* and *b*, "Alligator" ware; *c-e*, "Lost-Colour" ware; *f*, "Serpent" ware. Yale University. After MacCurdy. Scale $\frac{1}{3}$.

design shown in Fig. 38*d* seems to give the key to the origin of certain of the curvilinear details found on this class of pottery (e.g. Figs. 38*c* and 38*e*).

Pottery ornamented by this, or some analogous,

process has been found in the highlands of Ecuador in the southern continent.

Another interesting class of ware is constituted by the alligator group. The vessels are composed of a reddish paste, not always perfectly fired, and rather thick and heavy. The most common shape is a spherical-bodied vase with a short neck surmounted by a rounded lip. The body is covered with a cream slip, and the lip is painted red. Tripod bowls are not very common, and are sometimes transformed into animal shape by the



FIG. 39.—Talamancan vase representing a tapir.
Yale University. After MacCurdy. Scale $\frac{1}{3}$.

addition of a head and tail (Pl. XIV, 1). A number of actual animal vases occur, such as the tapir in Fig. 39, as well as other more elaborate patterns, but the latter are rare. The painted ornament is in red and black, and nearly always derived from the alligator. This animal only appears in painted form, just as the armadillo in moulded, and is conventionalized and dismembered in similar fashion. We find the parts are reduplicated, exaggerated, fused, transposed, isolated, and reduced to their lowest geometrical terms. Fig. 40*b* shows one of the more naturalistic representations of the animal, and attention should be called to the scales or "scutes," which the artist often employs, singly or in combination,

to compose an ornamental motive. Fig. 40a shows a slightly more conventionalized form, in which some of the scutes are reversed, while others have degenerated into mere knobs. This figure illustrates well the peculiar crest at the back of the creature's neck—usually termed the “nuchal crest”—which is a common feature of the animal in art. Fig. 40d again illustrates the alligator, with head reversed, and scutes appearing as small angled projections. Fig. 40e is highly conventionalized, but displays the animal in the same position, with lower jaw and nuchal crest greatly exaggerated in order adequately to fill the given space. In Fig. 40f we have a double-headed variety, and in Fig. 40g a more conventional and symmetrical form, in which the image has been “spared” out of the ground. Simplified alligator forms may be seen in Figs. 40c and 41, and scute-motives in Figs. 38a and b and 39. Most of the small whistles described below are formed of this class of ware.

The polychrome ware is rare, and is distinguished by the presence of a fine purple pigment in addition to black and red. On the whole it resembles the last class, though the forms are finer, the cream slip showing a tendency to salmon, and the paste being a dark red. Alligator forms and derivatives supply the principal motives, and one magnificent standing bowl, illustrated in colours as a frontispiece to MacCurdy's monograph, is painted on the interior with the finest representation of this animal known in the art of this region. On the exterior of this vase alligator forms occur in much the same style as the snake on some of the Chorotega pots (compare Figs. 42 and 17a, p. 67). Another very beautiful little vase appears in Fig. 43. Here the purple is indicated by cross-hatching, the red by vertical lines, and the cream ground-colour is left plain. The design at first sight looks like a white scroll-pattern on a black ground, but is in reality a series of highly conventionalized scute-motives in solid black, which have

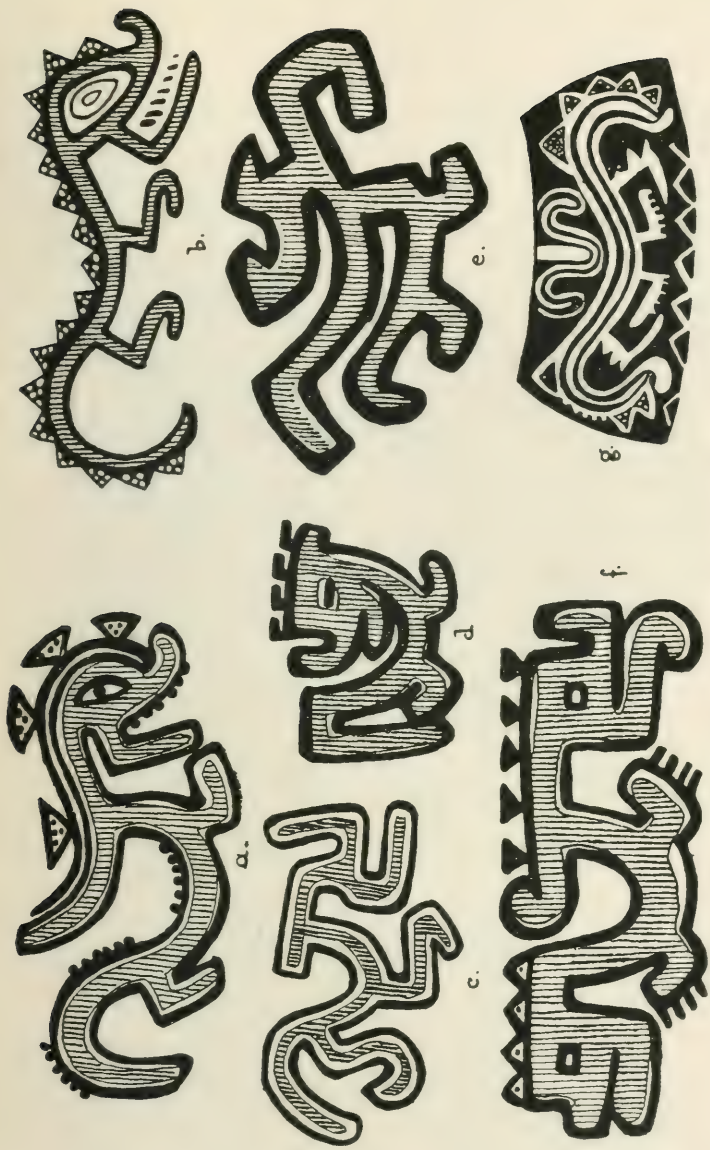


FIG. 40.—“Alligator” designs from Talamancan vases. After MacCurdy.

coalesced to form a running design prolonged into scrolls.

A number of musical instruments were made in pottery. The modern drum found in the Terraba region is of wood, and cylindrical in shape, with one end

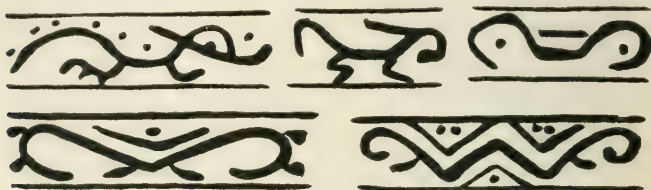


FIG. 41.—“Alligator” motives, from Talamancan pottery.
After MacCurdy.

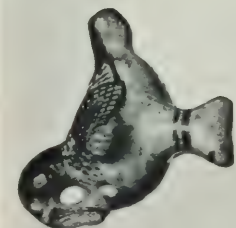
covered with iguana skin. In the cemetery at Buenos Aires pottery objects of similar pattern have been found, which probably were originally furnished with membranes of a like material. Small rattles in gourd-shape frequently occur, but by far the most common form of musical instrument is the whistle. Whistles appear in a



FIG. 42.—Design from Talamancan vase. *After MacCurdy.*

great variety of shapes, but the principle involved is the same in all, viz. the impinging of a stream of air on a cutting edge at the mouth of a chamber. Cylindrical whistles, of our “penny whistle” type, occur (Fig. 44*c*), but are by no means common, and these, like the rest, are furnished with one or more finger-holes by means of which a succession of notes can be produced. As a

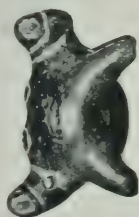
Barro Colorado



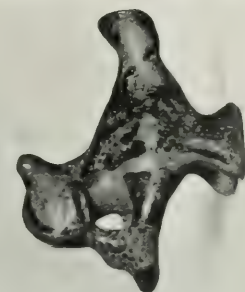
4.



3.



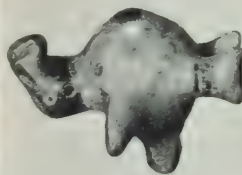
2.



7.



6.



1.



5.

COSTA RICA AND PANAMA
TALAMANCAN POTTERY (1-4 AND 7 ARE WHISTLES)
(Scale: 1/3rd)

general rule whistles are capable of producing three tones, each of two intervals, thus constituting a major second. Usually the instruments assume the form of a man or woman, or some animal, such as jaguar, monkey, tapir, peccary, squirrel, armadillo, owl, parrot, snake, scorpion or crab (see Pl. XV and Fig. 44*a*); others again



FIG. 43.—Fine Talamancan vase; “Lost-Colour” ware.
Yale University. After MacCurdy. Scale ½.

are moulded in the peculiar form shown in Fig. 44*b*. Metal bells, of the “hawk-bell” variety, complete the list of musical instruments discovered, but we know that at the Conquest trumpets, probably made of conch-shells, were employed in war. Columbus on his arrival at the Chiriqui Lagoon was greeted with the sound of “horns” and drums sounded with hostile intent, and Peter Martyr states that the inhabitants of the Atlantic coast of Veragua used “drummes or

tymbrels made of the shelles of certayne sea-fishes wherewith they encourage themselves in the wars.”

As stated before, the great majority of the whistles discovered belong to the alligator class of ware, and it should be added that certain figurines, which are not whistles, are also found, almost invariably in human



FIG. 44.—Pottery whistles; Talamancan. *Yale University.*
After MacCurdy. Scale, a, $\frac{1}{3}$; b, $\frac{2}{3}$; c, $\frac{1}{2}$.

form, and often representing a woman holding a baby (Pl. XV, 5). The purpose of these is uncertain, but they may have been toys.

Of the pottery of this region as a whole, enough has been said for the purpose of this book, though the subject might be considerably prolonged in detail. From the above descriptions, accompanied by the illustrations, some idea may be gained of the versatility of the early

potter, as well as the generic similarity which underlies the variety of his handiwork. As a class, Chiriqui pottery is second to none in America in interest. For technique and form, the armadillo ware cannot be surpassed in either continent, while the painted varieties supply a very fascinating chapter in the history of the development of designs. Though stamped with a character peculiarly its own, this pottery shows a definite relation to that of the region to the north and west, and also, in certain points of technique, to that of South America, and this fact supports the idea that the Isthmian region, as might be inferred from its geographical position, supplies a link between the cultures respectively of the northern and southern continents.

To summarize, therefore, the whole region from Nicaragua to Panama stands, culturally speaking, midway between the area of Mexican and Mayan civilization on the one hand, and that of the South Americans on the other. The influence from the north is the more powerful and extensive, owing to the fact that Nahuatl-speaking tribes penetrated the country as far south as the Chiriqui lagoon, influencing radically the religion of the Chorotega, and, to a less extent, that of the western Sumo. Their invasion however was not of a very early date, and it is a little difficult to say how many of the small details which seem to imply northern connection may not be attributed to an earlier influence exerted by the Maya. Thus the great importance of the alligator in art might be taken as evidence of the latter, especially as designs representing some monstrous creature of this nature occur on pottery which appears to antedate the Nahuatl invasion (e.g. at Ometepec). The use of bird and beast heads, and grotesque snout masks, as the feet of tripod vases again suggests northern influence upon the pottery; but this becomes attenuated in the Talamanca area, where a certain interesting technique, viz. the "lost-colour" process, suggests a South American

connection. Other definitely "Mexican-like" features are the metates of Nicaragua and Nicoya, and the details of the journey taken by the disembodied soul among the later Talamanca. It is interesting to note that certain practices, characteristic alike of Mexico and South America, seem to have encroached from either end upon the region with which we are concerned, leaving the centre untouched. One of these is cannibalism, introduced for ceremonial purposes by the Nicarao and adopted by the Chorotega (and, apparently, by some of the Sumo), which is not met again until we reach eastern Panama, where certain immigrant tribes from South America were found. Another is cremation, also a Nicarao custom, but one which the Chorotega do not seem to have borrowed, though some of the western Sumo appear to have adopted it. This again is not found elsewhere except among some of the eastern Cueva, into whose region it may have found its way from Colombia, where certain of the tribes, notably the Quimbaya, regularly burnt their dead. Among other points which seem to imply influence from the southern continent may be mentioned the use of cover-shells by men and of arrow poison (both found sporadically among the Cueva), cassava-cultivation, and the unwall'd shelter as a dwelling-place; the two latter having spread further to the north. An interesting question is provided by the practice of urn-burial by the Chorotega. Urn-burial in some form is characteristic of a large area of the southern continent, including parts of Colombia, Venezuela, and Brazil. Between the Chorotega and this region, however, it is not found, though, it is true, among the Cueva its place was taken by another South American practice, the preservation of the dead above ground.

We have therefore a gradual transition in customs, religion and products, from those of the region to the north, to those of South America; but as far as the products are concerned, the original tribes who occupied

the intermediate area have not been mastered by the two influences to which in varying degrees they were subjected, but rather have mastered them, so that their pottery and stonework express each a character of its own. The manufactures of different districts evidently passed by way of trade from tribe to tribe, such as the stone figurines of Nicoya and the gold-work of Panama, while, as we have seen, many of the peoples were accustomed to make long trading excursions far beyond the boundaries of their own provinces. The evidence at our disposal would seem to show that expeditions of this nature were most extensive in a southerly direction, for there is no indication of any northward voyages of so enterprising a nature as those of the tribes of eastern Panama along the coast of Ecuador. Yet the effect that such intercourse with the south must have had upon the ethnography of the region under discussion is compensated by the fact that the tribes to the north had immigrated in far greater numbers than those to the south.

As regards the question to which stock did the original inhabitants belong in the main, the answer suggested by such evidence as we have at present would seem to be that, at any rate as far north as the Chorotega-Voto boundary, they were akin to the South Americans. The position of the Chorotega is obscure; as I have remarked above, the monolithic sculptures discovered in part of their region suggest Maya influence direct or indirect, while traces of their language are found in southern Guatemala. At the same time their custom of urn-burial is distinctly South American in character. The difficulty is increased by the fact that we do not know to what extent, if at all, the carvers of the statues are to be connected with the occupants of the urns. The slip-ware found in the cemeteries appears technically akin to that of the Guetar, but the technique may have spread from the former to the latter. We find on the Chorotega urn-covers designs apparently derived from

a monster's head which occurs in more naturalistic forms on the fine Nicoyan pottery; and, apart from the fact that there were undoubtedly immigrants from the north settled in the Nicoyan peninsula, the designs on this pottery often show marked kinship with Mexico-Mayan art. On the whole, therefore, it seems best to leave this question in suspense until further researches made in the country can supply evidence on which to base an answer.

As regards the question of any influence emanating from some source outside America in days prior to the discovery, it is hardly necessary to enter upon a discussion. At present there is no definite evidence of any such; what I have written previously of Peru and Mexico holds good equally for this region, and the culture represented by the remains has equally every right to be regarded as essentially American.

PART II

THE WEST INDIES

INTRODUCTION

THE West Indian Islands, which in some respects may be regarded as forming one of the most favoured regions in the world, and which certainly contain some of the world's most beautiful scenery, may be divided geographically into three areas, the division corresponding to that which might also be made on ethnographical lines, at any rate as far as the population at the time of the discovery is concerned.

In the west are the Greater Antilles, Jamaica, Cuba, Santo Domingo and Porto Rico ; north of them are the Bahamas ; while to the east and south are the Lesser Antilles, divided into the Windward and Leeward groups. Unfortunately some confusion has arisen relative to the employment of the two last terms. Originally the Windward Islands included all the Lesser Antilles from the Virgin Islands to Trinidad, while the term Leeward Islands was restricted to the islands off the coast of South America. Later however the name Windward has been restricted to Martinique, Santa Lucia, St. Vincent, the Grenadines and Grenada, while that of Leeward has been applied to the northern portion of the chain from the Virgins to Dominica.

Both the Greater and Lesser Antilles differ from the Isthmian region in being an area, not of elevation, but of subsidence, and it would appear that the former were originally connected with the Isthmus via the

Caymans and the Misteriosa Bank, as well as via the Pedro and Seranilla Banks; while the Lesser Antilles once formed a continuous strip between Florida and South America. The Greater Antilles rest on a common submarine bed, and belong to the same geological and orographical systems. According to Keane, they now present the aspect, not so much of an insular, as a disrupted continental, domain, which once extended continuously for 1200 miles from Cuba to the Virgin group. This now partially submerged tract is traversed by a lofty range, culminating in Santo Domingo, of which the peaks are nearly 12,000 feet high, and falling off on either side in Cuba, Jamaica and Porto Rico. Geologically they are composed to a large extent of limestones, with outcrops of plutonic and crystalline rocks, including granite porphyry and basalt, being all much older than the eruptive rocks of the Lesser Antilles, and nowhere showing traces of recent volcanic activity.

The Bahamas belong to a separate formation, being low coralline reefs and islands, and bearing a close affinity to the peninsula of Florida, which is a consolidated coralline archipelago.

The Lesser Antilles in the north form a double chain, of which the inner is part of the original isthmus. The outer, which terminates abruptly at Maria Galante, is more recent, and represents an area of upheaval on the seaward slope of the inner chain. With the exception of Antigua, the formation of which is partly igneous, all its members are of marine origin, being composed of coralline reefs below and limestones above. Their elevation is nowhere more than 2000 feet. The inner chain, which continues through to Grenada, is in reality a partly submerged igneous range of considerable age, though younger than the Greater Antilles. The islands represent old volcanic cones, which culminate in Dominica at a height of 5340 feet. Trinidad and Tobago belong geologically to Venezuela, and Barbados appears

to be a continuation of this extension from the continent. Throughout the islands, the vegetation is very exuberant, and includes plants of such economic importance as maize, cassava, breadfruit, arrowroot, yams, sweet potato and pimento. The *fauna*, except for birds, is correspondingly poor, and most of the species differ from those of the mainland, owing to the length of time that the islands have been separated from the continent. The largest mammal was the agouti, which, with the iguana, furnished the chief flesh food of the aborigines. Fish and turtle are plentiful throughout, but the Greater Antilles are particularly favoured in being free from poisonous snakes, though the deadly fer-de-lance occurs in Santa Lucia and Martinique.

With regard to particular islands it may be as well to give a few particulars. Cuba is 730 miles long, with an average breadth of about 50 miles. In the west is hilly country of moderate elevation, with fertile slopes and valleys. The centre is more open, with broad inclined plains and low forested hills, while the east is distinctly mountainous. Palms grow in great abundance almost everywhere, while the cactus is found in the east and the pine in the west. This island is furnished with better harbours than the rest.

Jamaica has a length of some 150 miles, with a greatest breadth of 50. Geologically the island is an extension of the Tiburon peninsula of Santo Domingo. In the east the island is traversed by the Blue Mountains, which send off lateral spurs towards the coast, from which they are separated by a low-lying plain. Behind this plain is a series of cliffs ravined by running water, consisting of old sea-beaches lying in successive terraces. Everywhere the verdure is almost beyond compare, and the island as a whole provides some of the most beautiful scenery in the world.

Santo Domingo, with a total length of 400 miles and an extreme breadth of 160, is essentially mountainous,

with steep escarpments approaching the sea almost everywhere. The rather indistinct ranges are broken by various rivers and lakes, giving rise to great diversity of scenery, and producing a wider range of climate, than is found in most of the other islands. Porto Rico is smaller than the rest, being only 96 by 36 miles in average. The interior is a moderately elevated plateau, well-watered and wooded.

The Bahamas, being for the most part small and low-lying, are without any very distinctive features, though some of the larger islands possess a forest vegetation, including pine and mahogany. A variety of opossum was the only mammal, but birds were present in abundance, as well as fish, shell-fish and turtle.

Of the Lesser Antilles sufficient has already been said for the purposes of this book, but it might be added that the volcanoes, of which many of them consist, continue to show signs of activity, and the terrible eruption of the Soufrière in St. Vincent, which occurred so recently, is a living memory in the minds of all of us.

In fact, by some compensation of nature, this region, one of the fairest which earth has to show, seems particularly subject to great natural cataclysms. The Greater Antilles, it is true, are immune from actual eruptions, but they are nevertheless subject to earthquake, as witness that which occurred in Jamaica only a few years ago. Moreover all alike are exposed to the most furious hurricanes. It is not surprising that the peoples inhabiting the islands developed a religious system which consisted in the main of a propitiation of the powers of nature; but, though they were exposed to some of the most destructive of natural forces, they lived and flourished, according to their lights a simple kindly and generous folk, until western greed of gold, clad in the false livery of civilization and true religion, achieved what nature in her most malevolent mood had not accomplished, their extermination.

CHAPTER VIII.—THE WEST INDIES GOVERNMENT, MARRIAGE AND WAR

THE West Indian Islands at the time of the discovery were inhabited by two distinct peoples, both apparently of South American origin. The population of the Greater Antilles, Cuba, Jamaica, Santo Domingo and Porto Rico, belonged to the Arawak stock, and so too did the Lucayans, or inhabitants of the Bahamas. The Lesser Antilles were peopled by Caribs, whose typical culture had, nevertheless, been modified to some extent by the Arawak, their predecessors. The course of history, according to the accepted theory, had been as follows: at an early date the Arawak had gradually spread over the whole of the Antilles from the southern continent, voyaging from island to island. For a time they remained in peace, developing a culture which to some extent became specialized. Later they were invaded by the Carib, who followed the same path, overrunning island after island, exterminating the men, and taking the women as wives. By the time of the discovery the later comers were in possession of the whole of the Lesser Antilles, and had made considerable impression on the eastern end of Porto Rico, where their raids were frequent. They were known and feared in Santo Domingo, where a tract of territory was ruled by a Cacique who was, in fact, a Carib immigrant, and they even made occasional descents upon Jamaica. Their contact with the earlier settlers, and especially their inter-marriage with Arawak women, had affected their ethnography to some degree; the power of women

in the early education of the children is, of course, enormous, and the sons and daughters of such mixed unions would naturally learn much from their mothers. In fact we find the statement that among the insular Carib the women spoke a different language or dialect from the men, and this would not be unnatural, since the girls would remain longer with the mothers, while the boys would be associating with the men of the community from a comparatively early age. The Arawak of the Greater Antilles are usually termed "Tainan," from the fact that the first words heard by the Spaniards (from Arawak captives) when they landed on Guadeloupe were "Taino, taino," or "Peace, peace." As stated above, the inhabitants of the Bahamas are generally known as Lucayan, being somewhat specialized, though of the same stock.

Apart from language and general customs, there is little evidence of the South American origin of the Tainan. The creation myths of the people of Santo Domingo, related below, point to certain caves on the island as the locality where the human race originated, though one legend states that the original inhabitants came from Matinino, or Martinique. According to this story the colonists built their first hut on an island at the mouth of the river Bahaboni, and at the site of this hut, called Camoteia, offerings were made up to the time of the discovery. The arrival of the Carib in the islands having occurred in more recent times, their traditions were more precise. The Carib of St. Vincent stated that they had originally been subject to the Arawak of the mainland, but that they rebelled and escaped to the islands, colonizing Tobago first. In Dominica it was stated that they came from the land of the "Galibi," on the southern continent, who were their friends and relations. The motive which led to their emigration was the desire to attack the Arawak of the islands, whom they subdued, killing all the men.

Of the individual islands far more is known concerning Santo Domingo, to which the name Quizqueia, "Great," is said to have been given originally. Later it was called Haiti, "Rocky," and the Spaniards finally termed it Santo Domingo. Porto Rico bore the name of Boriquen when first discovered, and Cuba in the earliest days was known to the Spaniards as Juana. Similarly the name of Watling Island, in the Bahamas, the first land seen by Columbus, was Guanahani, and that of Guadeloupe was Queraquiera. Regarding the population of the islands as divided into two main groups, Tainan and Carib, both the early statements and later researches bear witness to the fact that each group, to speak broadly, was similar in language, customs and religion. Individual differences of course existed in detail, and where the two groups had come in contact, there had been further local modifications, as will appear later. But it is fairly safe to infer that where we get a fairly complete picture of any side of native life in a given island, it may be taken as fairly typical of the other islands belonging to the group. A possible exception is provided by the western end of Cuba, where the archaeology exhibits slight differences, and where we have every reason to believe that some contact had been established with the inhabitants of Yucatan.

Physically the inhabitants were of a dark brown colour, of medium stature, and well-proportioned. Their faces were not considered pleasing by the Spaniards, owing to the fashion of deforming the heads of children in infancy, and a tendency to breadth of nose. In temperament they were simple and good-natured, and everywhere treated the Spaniards with great kindness until continued ill-treatment forced them to retaliate. Columbus speaks of them as "simple, honest and exceedingly liberal with all they have," and his son relates how after considerable intercourse in the way of trade at Santo Domingo "we lost not the value

of a pin." It is true that in some of the islands the Spaniards were greeted with a warlike demonstration, but friendly relations were always established very quickly, and the visitors were extremely well treated. It is possible that where the reception was at first hostile the inhabitants had previously suffered from Carib raids and were therefore suspicious of all new-comers. Peter Martyr relates how Spanish envoys were received in Xaragua by thirty of the chief's wives, dancing with green branches in their hands, which they handed one by one to the leader with an obeisance, after which a feast was held and the visitors were conducted to hammocks. Next day various dances and games, including a sham fight, were instituted in their honour.

No doubt the extremely kind and respectful treatment accorded to the Spaniards at first was in part due to the fact that they were believed to have come from heaven, and to be of divine origin. Indeed this supposition, including the belief that they were immortal, lasted longer than the conduct of the Spaniards warranted. Indeed, in Porto Rico the belief in the immortality of the white men was only dispelled by an actual experiment, of rather a grimly humorous nature. A certain Spaniard, named Salzedo, while on a journey, passed the night with a chief called Brayau, and next day was furnished with guides across the country. On arriving at a river, one of the guides took Salzedo on his shoulders to carry him across a stream. When in the middle the guide pretended to stumble, and with the aid of his comrades held the unfortunate Spaniard under water until he was drowned. The body was removed from the river, and the natives surrounded it, uttering lamentations and excuses which they maintained for two or three days until the condition of the corpse made it obvious that Salzedo was dead. Even then Brayau could not believe the report until he had seen the body with his own eyes, but after he had done

so, his testimony encouraged the other chiefs to make a determined attempt to throw off the yoke of their oppressors. Even the fierce Carib were mild and generous on ordinary occasions, and unkindness on the part of a friend would sometimes cause the sufferer to pine and die. Among themselves they showed many good qualities, being the reverse of dissolute, and treating the aged with reverence, though they were implacable when offended. They too regarded the Spaniards at first as superior beings, showing much appreciation of the wares they brought, though often misunderstanding their nature. Thus they believed that gunpowder was a seed, and asked for some to sow. But the halo with which the invaders were at first invested was soon dispelled, and we hear that if a native missed any property from his hut his first observation was invariably "Some Christian has been here."

The government under which the Tainan lived in days prior to the discovery was mildly despotic. They were ruled by a number of hereditary chieftains, called *Cacique*, who exercised authority over definite districts. These Caciques were the leaders in peace and war, and also exercised certain religious functions in so far as they presided at some of the religious ceremonies. They were supported by sub-chiefs, presiding over districts, and they again by village headmen. In the words of Fewkes: "As a rule each village seems to have had a chieftain or patriarchal head of the clans composing it, whose house was larger than the other houses and contained the idols belonging to the families. The Cacique, his numerous wives and their children, brothers, sisters and other kindred, were a considerable population, often forming a whole village. In addition to the household of the chief, consisting of his wives and immediate relations, a prehistoric village ordinarily contained also men, women and children of more distant kinship." The term *Cacique* is used in a very loose way by the

early chroniclers to designate any leader or headman, and this often produces confusion. Of the various Caciques, those of Santo Domingo alone (using the term to designate independent rulers) can be named. These are as follows, and their respective territories are shown on the accompanying map after Charlevoix (Fig. 45). The Cacique Guarionex ruled over the district known as Magua, comprising the central and best portion of the plain of Vega Real. Goacanagaric, in whose territory the Spaniards first settled, held sway over the region of Marien, on the north coast from Cape Nicolas to the river Yaqué (Monte Christo). Cayonabo ruled over Maguana, a region which comprised most of Cibao, where were the richest gold-mines, and almost the whole course of the river Hattibonito. He was an immigrant Carib, and, being more warlike than the Tainan Caciques, was regarded as the most powerful. Behechio was lord of the largest and most populous district, that of Xaragua, which included all the west coast and a great part of the south. His sister, Anacaona, was married to Cayonabo, but returned to her brother's province after his death and inherited his power, owing to the fact that he had no children. Cayacoa presided over the east of the island, the province known as Higuey, from the river Yaqué to the river Ozama. He also was regarded as a powerful chief, as his subjects were the most warlike, owing to the fact that they had had much experience of Carib raids. Of the other islands little is known. In southern Porto Rico we hear much of a Cacique Aguebana who is said to have exercised a sort of suzerainty over the other Caciques in the island, though this is doubtful. In eastern Cuba was a chief named Hatuey, who was by birth a native of Santo Domingo, but had emigrated to avoid slavery and had become a Cacique. He maintained intimate relations with his birthplace, and even kept spies in Santo Domingo, by whom he was informed when the Spaniards

made up their minds to invade Cuba. Thus, though the power of the Caciques was in the main hereditary, we see, from the example both of this chieftain and of the Carib Cayonabo, that a man of energy and enterprise could raise himself to that position by his own efforts. The Caciques were treated with great respect, and, in a very limited way, maintained a certain amount of state. Thus we are told that, when Goacanagaric came on board the ship of Columbus, he was accompanied by two old men who acted as his mouthpieces and spoke for him, apparently even when he wished to communicate with his own subjects. Caciques bore long titles, and, when a child was born to one of them, the natives in the neighbourhood would flock to salute the new arrival with the various titles with which his rank endowed him. Their rule was absolute, the lives and goods of their subjects were at their disposal, and they ordered the routine of daily work, much of which was performed in common. Peter Martyr observes that "Every king hath his subjects divided to sundry affairs, as some to fishing, other to hunting and other some to husbandrie." The sub-chiefs exercised similar control over the people entrusted to their charge, and Columbus writes: "I could not clearly understand whether this people possess any private property, for I observed that one man had the charge of distributing various things to the rest, but especially meat, provisions and the like." Chiefs exacted no regular tribute from their subjects, but the best of the game or fish taken, and the finest of the agricultural produce, was reserved for them, and it was regarded as a sin for a commoner even to wish to appropriate it. The populace and the sub-chiefs seem to have been very loyal to the great Caciques and many instances of devotion are recorded. For instance, when Guarionex was a fugitive from the Spaniards, he retired to the district of Mayobanex, one of his sub-chiefs, who refused to give him up, though his territory was invaded by the oppressors.

Besides the Caciques, there seem to have been distinctions of rank among the generality of the inhabitants; thus there were certain "nobles" who were called *Nitayno* or *Mitani*, and who are particularly mentioned as having a good knowledge of local boundaries. As regards the inheritance of rank, the Cacique seems in ordinary cases to have been succeeded by his eldest son, irrespective of who the mother might be, and we are told that, if the wife of a Cacique refused to be buried with her deceased husband, it was believed that she must have been unfaithful to him, and her children were debarred from the succession. If the son left no heir, the power passed to the eldest son of his eldest sister. Women seem occasionally to have attained the supreme rank, as in the case of Anacaona, mentioned above, who inherited from her brother Behechio, and we also hear of a female Cacique in Porto Rico. It is probable that when once the power had passed into the sister's family, all her sons inherited in order of age, since the Aguebana mentioned above as a prominent Cacique in Porto Rico was succeeded by his brother, who bore the same name. No doubt, in the case of the inheritance of rank, the individuality of the Cacique counted for much. As regards property the system of inheritance through the female seems to have prevailed. A man's heir in normal cases was the eldest son of his eldest sister, the heirs in reversion being, first his brothers in order of age, next his own sons, and finally some prominent noble. The children of Caciques received instruction in the traditional lore of their people at the hands of the priests. The Cacique also exercised the function of supreme judge, but, as the people were very subservient, anything like crime appears to have been very rare. Theft was regarded as an extremely disgraceful offence, and the culprit had no hope of pardon, but was impaled. Other offences were usually punished by hanging. It is interesting to note that open-handedness was to such an

extent a characteristic of the Tainan, that the charge of avarice was regarded as a disgrace hardly to be borne.

Among the Lucayans the constitution seems to have been ordered on similar lines. The chiefs were much revered, and superintended the agricultural operations, the hunting and fishing, besides storing and allotting the produce of the united efforts of the settlement. No doubt owing to the small size of the islands their power was more patriarchal and less despotic; laws, for instance, seem to have been fewer, and we are told that each man was the judge of his own actions, though no doubt the right of private revenge existed.

Certain points about the Carib form of government, as we hear of it, suggest that it was of a slightly more democratic order. We hear of Caciques and Elders, but it is not certain that the power of the former was hereditary. The first Carib invaders who settled on Dominica were ruled by a chief who bore the title of *Ubutu-timani*, and who maintained some form of state, in so far as he was carried about on the shoulders of his henchmen. It is possible that he corresponded to the official who in later times was the war-leader, called generally Cacique by the Spaniards, but known to the natives under the title of *Ubutu*. The Ubutu was elected for life, and had the power of convening the assembly of adult men at the *Carbet*, or communal house. He was always attended by certain retainers, whose number varied with the individual importance of the Ubutu. We are told that at most there were only two in each island, as in later Dominica. The Ubutu was chosen for his bodily prowess, and it was necessary that he should have killed several Arawak, or a chief, with his own hand; he was supported by a lieutenant called *Ubutu Maliarici*. A lesser variety of chief was the *Tiubutuli-hauthe*, the chief of the Carbet, who was a patriarchal ruler, being in fact the head of a large family who had founded a settlement. Other officials, whose duties pertained

rather to war, were the *Nhalene*, or commander of a "fleet" of canoes, and the *Tiubutuli canâoa*, or captain of a single canoe. The entire force of canoes, often composed of detachments from several villages, were under the command of the Ubutu. We are told that there were no officials approximating to magistrates, but that the right of revenge was recognized, and, indeed, was incumbent upon all the relations of a man who had suffered wrong or had been killed, under a penalty of public disgrace.

Neither Tainan nor Carib knew of any form of writing, and such lore as they possessed was traditional, preserved in the songs which accompanied their dances, and in the memories of their priests. For reckoning time, e.g. the number of days before the date fixed for a warlike expedition, the Carib would put a number of seeds in a calabash, and extract one daily, or make knots in a string or notches in a stick, loosing a knot or cutting off a notch day by day until none were left. The Carib too seem to have observed the stars to some extent; for instance, Ferdinand Columbus states, in his description of Guadeloupe, that "In other places (presumably the Greater Antilles) they only reckon the time by the sun, and the night by the moon, whereas these women (in Guadeloupe) reckoned by other stars, saying that when the Charles' Wain rises, or such a star is in the north, then it is time to do so-and-so." Elsewhere we learn that the Carib as a whole reckoned time by lunar months, and judged the commencement of the year by the position of the Pleiads, though it is added that expert knowledge of this nature was confined to men of rank.

A peculiar custom, not unknown in other parts of the world, was that in accordance with which two prominent men who were very friendly would accentuate the tie by an exchange of names, each henceforward being known by the name of the other. The ceremony was seriously regarded, and was supposed to make the parties

friends for all time. There are several instances of the exchange of names between Spaniards and Indians, for instance, Ponce de Leon and the Porto Rican Aguebana, and Sotomayor, with the latter's brother, but it is to be feared that the Spaniards did not attach equal importance to the obligation which they thereby incurred.

As regards the marriage customs of the Tainan, very little is known. Polygamy was certainly practised by the Caciques, some of whom had as many as thirty wives, but among the ordinary folk it would seem that monogamy was the rule, though not invariable. Possibly the number of a man's wives depended upon local conditions, as well as upon his inclinations and his ability to support more than one. As to the constitution of the harem of a Cacique there is some doubt. Benzoni states that one wife had authority over the rest, but Oviedo declares that they were all equal. According to Las Casas, a Cacique would send one of his chief men to demand a girl whom he fancied from her father, sometimes accompanying the demand with a present of food. Later, after obtaining the parent's consent, the Cacique visited him and arranged the bride-price, which was paid in daily instalments for a month. During this time the girl was secluded in a hut, seeing no one but the children who were appointed to take her food. The price paid, the girl's hair was cut in signification of her new estate, and she was taken over by the Cacique. Among the commoners it was customary for the suitor to contribute his personal services to his future father-in-law for a certain period in lieu of price. The actual union was celebrated by a feast and dancing, and it is stated, at least of the Cubans, that the men of the same rank as the bridegroom might on this occasion exercise certain rights over the bride, the privileges of Caciques and priests being extended to include the women of the lowest class. Oviedo states that marriages were allowed between any two individuals save those of the first

degree of consanguinity. Childbirth appears to have been easy, and Benzoni states that the mother simply carried the infant to the sea or river and washed it, and without more ado proceeded to give it suck.

The Carib too were polygynous, though only the Caciques indulged in the practice to any extent. We are told that the partners were usually faithful one to the other, and that a first wife was rarely abandoned, especially if she had borne any children. It would appear that a man had a definite right to his female cousin, whom he might take to his hut without further ceremony, but sufficient details are not available for us to know whether we have here another instance of "cross-cousin" marriage as found in parts of Melanesia. Indeed we are told that in early days only two classes of wife were regarded as legitimate, namely cousins, and girls presented to a man under the following circumstances.

On the return from a warlike expedition an assembly was held in the Carbet, or communal house, where the Cacique related the history of the campaign, distributing praise and blame to the individual warriors. Sometimes after this the head of a family would present a daughter to a distinguished warrior, whom the latter could not by custom refuse. If however a man had no female cousins, or was too late in claiming them, he might, at any rate in more recent times, apply to the head of an unrelated family for one of his daughters. Owing to the Carib custom of marrying their Tainan captives, there was a class of slave-wives, but we do not know that their status was any lower than the rest, and at any rate their children were considered free members of the tribe.

As regards childbirth, it is said that if delivery was difficult, the patient took a medicine made from the sap of the root of a kind of reed; but such occasions were rare, and, just as among the Tainan, a woman would often wash the new-born child and herself in a neighbouring

spring and return to work forthwith. A feast was usually held to commemorate the birth of a first child, but the arrival of further additions to the family passed without notice. Though so little care was shown to, or demanded by, the mother, the father was obliged to observe a number of precautions. This habit, known as the "couvade," was apparently based on the idea that the tender soul of his new-born infant was mysteriously connected with him, and liable to injury if he met with mischance or performed any strenuous labour. Thus, immediately upon the birth of the child he would retire to his hammock for ten or twelve days, eating and drinking nothing but a little cassava and water. For the next forty days or so he limited his diet to the centre of the cassava-root, hanging up the rest of the plant in the hut for the ensuing feast, and for the rest of the year he would abstain from certain delicacies for fear of injuring the child. These precautions were observed in their fullness only in the case of the first child, for later arrivals the fasts were less severe and prolonged. In some cases the treatment of the father was not merely negatively precautional, but active measures were adopted in order to produce certain results upon the mental constitution of the child. Thus, after the fast was concluded, the father's shoulders might be severely scarified with an agouti-tooth, and he was expected to bear the pain without flinching, so that the child might be brave. During the operation he stood with each foot resting on a cassava cake, which he ate afterwards, and the blood was not allowed to fall upon the ground, but was collected and rubbed upon the infant's face. This custom was more commonly observed in the case of boys, but in some places the immature spirit of a baby girl was similarly fortified. Infants were kept in small hammocks, or on beds of banana-leaves in the corner of the hut, and after ten or twelve days a man and woman, acting as "god-parents" according to the early account,

pierced the child's ears, nose and lip, and conferred upon it a name, usually taken from some ancestor, or a tree, or some person or animal met by the father shortly before its birth. The name was changed, in the case of a boy, when he became of military age, and again if he performed some distinguished action in war; thus if a warrior was so fortunate as to kill an Arawak or Tainan chief, he would assume the name of his victim. In fact, almost any occasion might suffice for a change of name, and a friend might be asked at a feast to suggest a new appellation, receiving a small present in return. At about the age of two the child's hair was cut, and the occasion was commemorated by a feast; sometimes the piercing of the ears and nose was postponed until then. The same term was used in speaking of a father-in-law as of a father, but a man was supposed to hold no converse with his wife's relations except on extraordinary occasions, though there were no corresponding restrictions in the case of a woman.

Before leaving the subject of marriage it will be as well to mention a very persistent rumour, dating from early times, of the existence of a community of "amazons" on the island of Martinique. This island was supposed to be inhabited only by women, who at certain seasons were visited by the men of other islands. The female children were retained by the mothers and entered the community, while the boys were sent away as they grew up. One account mentions a similar report of Guadeloupe, though another gives what is most probably the explanation of the story, viz. that at the arrival of the Spaniards the men of the village were away on a fishing expedition, and the women had turned out to repel the supposed invaders.¹

¹ In the account of Ferdinand Columbus, as given in translation in Churchill's *Voyages*, either the author or the translator has made a rather amusing mistake. He gives the amazon-legend as applying both to Guadeloupe and Martinique, but instead of calling the latter island by its true name, Matinino, he terms it Matrimonio.

The Tainans at any rate were on the whole a peaceable people, and we are told that the only causes of war were disputes arising with regard to boundaries and fishing rights and, of course, the necessity of defence against Carib raids. Peter Martyr states that the Jamaicans were more warlike than the inhabitants of the rest of the Greater Antilles, besides being more intelligent and better craftsmen. In Haiti the best fighters were the Ciguayo on the north coast and the tribes around Higüey on the east, who suffered from incursions on the part of the Carib. The Porto Ricans were fiercer than the Haitians since they were more exposed to the same danger, and indeed in the east had experienced something like an invasion. The weapons were of the simplest character. On the island of Guanahani Columbus found that the inhabitants were armed only with wooden javelins, with the ends merely hardened in the fire, or tipped with the spine or tooth of a fish, and the same might be said of the rest of the Bahamas. In Haiti, darts with reed shafts and fire-hardened wooden points were hurled by means of spear-throwers,¹ the latter being probably of the same type as in South America. Wooden spears were also used, and sword-clubs, called *macana*, of hard heavy wood, flat and pointed, but blunt at the edges and two fingers thick everywhere. These were furnished with a kind of guard at the hilt, and were employed with such effect that even a helmet afforded no adequate protection. The Porto Rican *macanas* are said to have been as long as a man. It would seem that bows were not used in Cuba, Jamaica or the Bahamas, and it is probable that in the earliest times they were unknown to the

¹ A peculiar mistake in translation occurs in the Hakluyt Society's edition of the letters of Columbus. Here the word *tiraderos*, which is the usual term employed by the early authors for spear-throwers, is translated "cross-bows," a weapon which of course was absolutely unknown to the Antilleans.

Tainan as a whole. However they were found in use in certain parts of Haiti and Porto Rico, where they must have been introduced by contact with the Carib.

Thus bows were employed by the Ciguayo, and, after Cayonabo had allied himself with this tribe, his brother attacked the Spaniards at the head of over seven thousand men, most of whom were archers. Bows "of yew almost as big as those of England and France" were also used around the gulf of Samana and the region of Higüey, and also by the Porto Ricans of the east and interior. The arrows had reed shafts with foreshafts of hard wood tipped with a fish-bone or a splinter of bone. It would appear that there was no use of poison and that defensive armour of any sort was unknown.

The bow was the principal weapon of the Carib, and the arrows are variously described as of reed with wooden points (Dominica) or tipped with turtle-shell, barbed fish-spines or human bone (Guadeloupe). Fire-arrows were also employed when making a descent upon a settlement. A vegetable poison was used in connection with arrows, at any rate by the insular Carib. In Paria, on the southern continent, however, where the inhabitants were expert archers, the arrows were innocent of this, though it was found again further along the coast, in the region known as Cumana. In the latter locality stone arrow-heads are mentioned, but these are not reported of the islanders nor found anywhere throughout the Antilles. Besides his bow, the Carib warrior carried a club, similar in shape to the macana of the Tainan, but called *butu*, the hilt of which was sometimes inlaid with bone and wood of another colour. Shields apparently were not used in the islands, though they were observed on the mainland in Paria. Columbus indeed saw a canoe off Trinidad, the crew of which were armed with bows and shields, but this had probably

come from the mainland. War was the principal business of the Carib man, and boys were trained to the use of the bow as soon as they could walk. In fact it is said that their dinners were fastened to the summit of a tree and that they had to shoot them down. When a boy approached puberty, a certain ceremony was observed by which he was admitted to the ranks of the warriors. The father summoned his friends, and the lad was seated on a stool in the centre of the Carbet or the hut. His father, after admonishing his son on his duty as a man, took a certain bird, and beat it to death against his body. The boy was then scarified with an agouti-tooth, and the wounds were rubbed with the bird after it had been dipped in an infusion of pepper. It was incumbent upon the candidate that he should evince no sign of pain, and when the ordeal was over he was given a piece of the bird's heart to eat, and retired to his hammock, where he endured a prolonged fast. From this time he was regarded as a warrior, and might attend all the assemblies of the adult men in the Carbet. Something has already been said about the military organization of the Carib in the pages dealing with their form of government, but a few more details may be added. When several Caciques joined forces, one was elected commander-in-chief, his authority lasting only as long as the campaign. The individual chosen had to be a warrior of experience, of proved courage, and an outstanding runner, swimmer and carrier of burdens, and he was obliged to undergo a cruel scarification with agouti-teeth to prove his indifference to pain. In order to excite the warriors to a campaign, whether against the Arawak of the mainland or their relations, the Tainan of the islands, a drinking-bout would be held, during which an old woman would enter the gathering and recite the wrongs, real or supposed, which they had received at the hands of their hereditary foes. If the assembly was sufficiently stirred, plans were

made forthwith, and the next days were devoted by the men to preparing their arms, and by the women to the furnishing of provisions. Dried fish, fruit, especially bananas and cassava flour, were placed in the canoes and securely fastened, so that they should not be lost if the craft capsized on launching. Nor was the share of the women limited to the preparations for a war, since a few were taken with the expedition to look after the provisions and to guard the canoes. Moreover the women were also skilled in the use of the bow, and, as has been stated above, on Guadeloupe were quite prepared to resist the Spaniards in the absence of their husbands. The voyage proceeded from island to island, and, in order that the stock of provisions might not run out, plantations were maintained on many of the smaller islets which were otherwise uninhabited. Frequent calls were made at other settlements to obtain allies, and in any case the "fleet" would land for the night and the crews would construct temporary shelters under which to suspend their hammocks. The Carib of St. Vincent usually raided the Arawak of the mainland, who did not retaliate after the former had definitely evacuated the island of Tobago. They invariably attempted to surprise the enemy, believing that a war commenced openly would not terminate in success. In fact we are told that if the raiding-party were discovered, or even if a dog barked, they would retire to their canoes and depart. It was considered a disgrace to leave any dead or wounded in the enemy's hands, and an attempt was always made, in the case of a repulse, to carry them away. Ambushes were laid into which the foe were enticed by simulated flight, and sometimes provision was made for an extended stay. Thus we are told by Peter Martyr that the Carib who raided Paria used to bring with them in their canoes "a great multitude of clubbes," which they fixed in the ground, and so constructed a palisade within which they could retire for the night. After a battle the

raiders would retire to the shore or to a neighbouring island and bewail any notable loss, taking with them any prisoners whom they had captured. The women were destined to serve as slave-wives, but the men were ultimately eaten, as described on page 217. As regards the mainland, the satisfaction of revenge and the acquisition of captives were the only objects sought in war; booty was not taken, and territory was never occupied. At the time of the discovery this seems to have been the case in the main with regard to the raids upon the Greater Antilles, but it is probable that these raids would have resulted eventually in the conquest of Porto Rico, in the same manner as the Lesser Antilles had been overrun and colonized. The effect of these continual depredations is noted by Peter Martyr. This author states that as the discoverers passed north-east from Paria, "they passed by many islandes, very fruiteful, yet left desolate and wasted by reason of the crueltie of the Canibales, for they went alande in many places, they found the ruines of many destroyed houses, yet in some places they found men, but those exceeding feareful, flieing to the mountaines, rocks and woodes at the sight of every straunger or shippe, and wandering without house or any certaine abyding-place for feare of the Canibales laying waite and hunting after them." The ceremony which took place after a raid has already been described (p. 169).

It is doubtful whether stone was ever used as material in the manufacture of weapons of war in the islands. Numbers of stone axe- or adze-blades have been found, and the early writers bear witness to the fact that stone axes were employed as tools. But there is no record of their use in fight. It is possible of course that the large Carib axes, such as are figured on Pl. XXIV, p. 236, were weapons, and many of them might well have been used simply in the hand, without the addition of a haft, just as the jade and basalt *mere* of the New Zealanders.

Again, an elaborate axe, such as is illustrated on Pl. XXIII, 4, might also be a chief's weapon. Still in the absence of any evidence, which in this case constitutes a negative argument of some force, we may conclude that the employment of stone weapons was at any rate exceptional.

CHAPTER IX.—THE WEST INDIES RELIGION

THE first impression of Columbus was that the aborigines of the islands possessed no religion, but this, like many other first impressions, was proved false by further experience. Yet, according to Peter Martyr, it was a long time before the Spaniards learnt anything about the beliefs of the people, and even now the accounts which have survived concerning the religious ideas of the Tainan relate almost exclusively to Santo Domingo. However, since we are told that the beliefs and practices on the other Tainan islands were similar, those of Santo Domingo may be taken as typical. The principal accounts of Tainan mythology are given by Ramon Pane and Peter Martyr, the latter having confessedly copied from the former. But the names of the legendary individuals mentioned do not appear in the same form, and where this is so I shall give first the name as written by Pane, and afterwards in brackets the spelling of Peter Martyr.

Like certain of the Mexican and Peruvian myths, the Haitian legend relates that mankind first issued from two caves. These caves were said to have been situated on Mount Canta, and were called Cazibaxagua and Amaiauva (Amaiauna). The former of the two was the larger, and gave birth to men of superior physique. These primaeval men seem to have been subject to a severe tabu in accordance with which they were forbidden to see the sun, and the entrance to the caverns was watched by a guardian of the name of Marocael (Machochael). This guardian himself was one day

surprised by dawn and turned to stone, and later certain men were caught by the sun while they were fishing and transformed into trees. Again, we hear that a certain ruler of this early cave-race, named Guagugiana (Vagoniona), sent one of his subjects, Giadruvava, to fetch a certain herb called *digo*, which was used in washing the body, and he too was surprised by the sun and turned into a certain bird which sings by night. Later Guagugiana grew tired of this nocturnal existence and left the cave, taking with him all the women and children, but leaving the men behind, with the exception, apparently, of one of his kinsmen, who is mentioned later. They deserted the island and travelled to Matinino, abandoning the children on the bank of a certain river, where they were eventually turned into frogs, which are always calling for their mothers ("Toa, toa," or "Mother, mother"). Guagugiana also rid himself of his kinsman, by inducing him to look over the side of the canoe at a beautiful water-snail, and then throwing him overboard while his attention was thus engaged. The eccentric leader then abandoned the women on Matinino and returned to the sea; here he found a woman who had been left behind, and who hid him in a submarine cave as he had developed a skin-disease. She also gave him certain ornaments of stone beads and gold, the former for his wrists and neck, the latter for his ears, and this was the origin of these ornaments, which were general in the islands. As Peter Martyr puts it, her gift consisted of "Pibble stones of marble, which they call cibas, and also certayne yellowe and bright plates of lattin, which they call guaninos. These thinges to this day are had in great estimation among the kinges as goodly jewelles and most holy reliques." The woman's name is given as Guabonito, and Guagugiana at this time altered his name to Biberoci Guahagiona. Meanwhile the inhabitants of Santo Domingo, being deprived of their women, were in distress. One

day while bathing they noticed certain creatures without sex sliding down the branches of the trees on the river bank. They tried to catch them, but the creatures eluded their grasp. Eventually they obtained the help of certain men called Caracaracoli, whose hands were very rough owing to a disease of the skin, and with the aid of their new allies succeeded in making a number of captures. The prisoners they transformed into women by the aid of woodpeckers, which they attached to their bodies. There is not very much to be obtained from this rather naïve and inconsequent legend. Interesting points are furnished by the hint of cave-dwelling, the sun-tabu, and the conversion of men into stones and trees. The connection between Santo Domingo and Martinique is also worth noting, together with the story that the women were abandoned at the latter island, a legend which might be meant to explain the report that it was peopled by Amazons.

It was believed that the sun and moon also issued from a certain cave called Giovovava (Iouanaboina) in the district controlled by a Cacique named Mancia Tiuvél (Machinnech). This cave was regarded as very holy, and the walls were adorned with pictographs. Within were two stone figures, called Boinaiel (Binthaitel) and Maroio (Marohu), represented with bound hands, "and they looked as if they sweated." Offerings were made to them when rain was desired.

Another myth concerns the origin of the sea. There was once a man called Giaia, who killed his son Giaiael, because he discovered that the latter contemplated parricide, and placed his bones in a calabash, which he suspended from the roof. One day he took down the calabash to examine it, and found that it had become full of water, and that the bones had changed into fish. Soon after, his hut was visited by four men, the sons of a woman named Itiba Tahuvava, who had borne them all at a birth. Giaia was away from the hut at the time,

and the eldest of the four, Dimivan Caracaracol, discovered the calabash, and, together with his brothers, ate a lot of the fish. Seeing Giaia returning, the thief hurriedly hung up the calabash again, but crookedly, so that much water ran from it, deluging the land and eventually forming the sea. The same legend, but differing in detail, occurs in Peter Martyr. Pane also relates an additional adventure of the brothers, which appears to have little point. They fled from the hut, and came to the dwelling of a man named Bassamanaco or Baiamanical. The eldest, being hungry, asked for cassava, but the owner of the hut was angry and threw at him a pouch of powdered tobacco, hitting him on the shoulder. The shoulder commenced to swell, and became so troublesome that the brothers cut it open with a stone knife and found therein a female tortoise, which they afterwards treasured with great care.

According to Charlevoix the early inhabitants of Cuba believed that the world had been created by the joint efforts of three personages, further, that there had occurred, in later times, an universal deluge, from which one old man had escaped in a boat together with his family and various animals. It is almost certain that these details are due to Christian influence, with regard to which it should be remembered that Columbus, who touched at Cuba on his first voyage, never lost an opportunity of attempting to initiate the natives into the mysteries of his faith.

The Antilleans believed in the existence of two supreme creating deities, a male sky-god, called Jockuvague Maorocon (Iocauna Guamaonocon), and a female earth-goddess who bore four names, Atabei (Attabeira), Iermaoguacar (Mamona), Apito (Guacarpita) and Zuimaco (Guimazoa). A fifth name is also added, Siella or Liella, but this may well be a corruption of the Spanish *Tierra*. They are said to have been mother and son, but this statement may rest on the

desire of the early missionary to discover in the beliefs of the natives some similarity to his own religion. The sky-god, to judge from the information given by Bachiller, also appears in Jamaica under the name of Yocahuna, and in Porto Rico as Yacana Gumanomocon. Besides these two great powers, respect was paid to a large number of images, some of which represented certain natural forces, while others were connected with ancestor-worship, and others again were fetishes. In this connection something must be said about the word *Zemi*, which is similar to the Peruvian term *Huaca*, and has nearly as wide an application. Fewkes explains it well as follows: "The name was apparently applied to gods, symbols of the deities, idols, bones or skulls of the dead, or anything supposed to have magic power. The dead or the spirits of the dead were called by the same term. The designation applied both to the magic power of the sky, the earth, the sun and the moon, as well as to the tutelary ancestors of clans. *Zemis* were represented symbolically by several objects, among which may be mentioned (1) stone or wooden images, (2) images of cotton and other fabrics enclosing bones, (3) prepared skulls, (4) masks, (5) frontal amulets, (6) pictures and decorations on the body." Of these classes the first probably represents the element of nature-worship in the native religion, the second and third the element of ancestor-worship, while the fifth and sixth may be regarded in the light of protective magic. The nature-zemi had various functions, some presided over agriculture, and of these different types promoted the fertility of different food-plants. Many of the fertility-zemi were buried in the fields, and the habit was so strong that, in the early days of the Spanish occupation of Santo Domingo, the natives stole the images from the churches and interred them in their plantations. Others brought luck in hunting or fishing, and others again had control of the rain or of the winds.



1

2

3

North of Union

GREATER ANTILLES

WOODEN IDOLS; FROM A CAVE IN CARPENTERS MOUNTAINS, JAMAICA

(Scale: 1/10th)

Each man had his personal zemi, and there appear to have been family zemi and tribal zemi also, the latter being kept in a hut apart which was owned by the Cacique. The names and histories of some of the more important Haitian zemi are known from the account of Ramon Pane, and I give a few of the details mentioned by him in order to present some idea of the stories current concerning them. The Zemi Baidrama, also known as Bugia and Aiba, was a miraculous figure of wood. In time of war it had been partially burnt, but on being washed with yucca-juice its arms and eyes grew again. When first made, it became angry with its makers because they gave it no yucca to eat, and afflicted them with a mysterious sickness, the origin of which was discovered by the divination of a priest. Another, called Corocose, was made of cotton, and belonged originally to a prominent man named Guamorete, who kept it in the roof of his hut. The hut was burnt, but the zemi escaped unaided and was discovered unharmed a bow-shot from the ruins. This zemi was said to have love-passages with native women, and children with double crowns were thought to be his. After the death of the original owner the zemi passed into the possession of the Cacique Guatabanex. Another zemi, belonging to a chief called Cavavan Iovana, rejoiced in the name of Opigielguovoian. It was of wood, had four feet like a dog, and was continually running away to the woods at night, even though it were bound with cords. When the Spaniards arrived, it, perhaps wisely, disappeared in a swamp and was never seen again. Another important zemi was a female figure called Guabancex, the property of a Cacique Aumatex. It was of stone, had control over wind and rain, and was supported by two subordinate zemi, Guatauva and Coatriscie, who were its assistants. The former, by command of its mistress, was supposed to summon the weather-zemi to help in producing a hurricane, while

to the latter was entrusted the task of gathering the waters of the rivers in the valleys among the mountains and letting them loose so as to produce floods. Faraguvaol was another zemi, which was discovered by some huntsmen. According to the account they observed "a certain creature" which they pursued. It ran into a ditch, and when they came up there was nothing there but a log "which looked like a thing that had life in it." They were afraid, and ran to tell the Cacique, named Cavizza, who had it transported to the village and built a hut for its accommodation. But, like the other zemi mentioned above, it developed a propensity for wandering, and frequently made off in the night to the spot where it was found, even though attempts were made to restrict its movements by confining it in a sack.

Of the making of wooden zemi, Pane gives some details. He states that sometimes when an Indian is travelling at night he sees a tree which appears to move in an uncanny manner. In fear he will stop and ask it who it is. The tree tells him to call a priest to whom to give directions. The priest comes and makes offerings, and then formally asks its name and whether it desires to be cut and trimmed to form a zemi. It is then carved in accordance with its instructions, and installed in a special hut where ceremonies are performed in its honour several times in the year. We are told that the majority of the zemi were in human form, but that they were carved in a variety of other shapes also, birds, snakes, turtles, frogs and crocodiles. But few of the wooden zemi have survived the ravages of time, yet some idea of their nature may be gathered from Pls. XVI and XXI. The human figure, I am inclined to believe, must represent a wind- or rain-deity. The presence of the grooves leading from the eyes down the cheeks, which were almost certainly emphasized by shell inlay, rather suggest tears, and such tears are often shown in

connection with the storm- and fertility-gods of Mexico and South America.

The stone zemi were said to be of three kinds. The first class was constituted by the stones which the priest pretended to have extracted from the bodies of patients, as described below (p. 197), and which were much prized for their supposed virtue in rendering childbirth painless. Others were prophetic, and "spoke," and are described as "shaped like a long turnip, with the leaves long and extended, like the shrub bearing capers. Those leaves are for the most part like those of the elm." The third kind were agricultural, and are said to "have three points, and they think they cause the yucca to thrive." It is interesting that a number of peculiar stone objects have been found which seem in a measure to correspond with the description of these zemi. They are usually known as "three-pointed stones," and Fewkes, who devotes a long discussion to them in his monograph on Porto Rico, distinguishes four varieties. The first of these resembles a man or an animal recumbent face downwards, with a conical projection rising from the back. A fine specimen of this kind is shown on Pl. XVII, 1 and 2, but it is not quite typical in so far as the projection is less conoid than in the great majority of instances, and is, moreover, furnished with engraved ornament. In most cases the head is grotesquely human, but a few specimens show the heads of birds or reptiles. In the second class the projection assumes larger proportions, and the whole stone approximates more closely to an equilateral triangle in outline. This type is furnished with a grotesque face carved in one side of the projection, and sometimes other bodily features are added on the other (see Pl. XVII, 3 and 4, and the cover-design). In the third type, the point of the projection forms the snout of a monstrous face, looking upwards (Pl. XVII, 5 and 7). The fourth is plain and

without any carving at all. The first type is by far the most common; the second is represented by comparatively few specimens, and the third is very rare. The distribution of these objects is limited; at present they have been found only in Porto Rico and the adjacent eastern end of Santo Domingo, with one exception. The latter is a broken specimen, much smaller than the rest, and very rudely carved, which is stated to have come from St. Vincent. The attribution has been doubted, but the authority is good, and I believe correct, being supported by the material. I am inclined to think it is an imitation made either by a Tainan slave or a Carib who had become familiar with the use of these objects and tried to make one for himself. In many cases there seems to be a definite shallow groove extending over the lateral projections of these stones, as if they were intended to be attached to some other object, perhaps a staff, by means of lashings, and this suggestion is in a measure supported by the fact that the bases are often left rough. But their exact use is a mystery concerning which many theories, none of them conclusive, have been put forward, and these will be found in Fewkes' monograph. I am inclined to believe that they are to be identified with the three-pointed agricultural zemi mentioned by Ramon Pane, and to leave in suspense the question whether they were ever attached to anything else.

While on this subject it will be as well to deal shortly with certain other even more enigmatical stone objects, namely, the stone "collars" and the so-called "elbow-stones" which appear to be generically related to them. Specimens of these collars are shown in Pls. XVIII and XIX, and Figs. 46 and 47, and a discussion at length of their forms and purpose will be found in Fewkes' monograph, supplemented by two other papers by the same author.¹ Mason conveniently divides the collars

¹ *American Anthropologist*, vols. xv. and xvi.

National Museum, Washington



GREATER ANTILLES
"THREE-POINTED STONES"
1, S. DOMINGO
3 & 5, PORTO RICO
(Scale: 1, 1/4th; 3, 1/2; 5, 3/8ths)

into two main classes, the slender oblique (e.g. Pl. XVII, and Fig. 46) and the massive (Pl. XIX and Fig. 47). The former are ovate, with an asymmetrical knob at the pointed end, while the latter are a more regular oval. The slender collars are usually the more highly decorated,

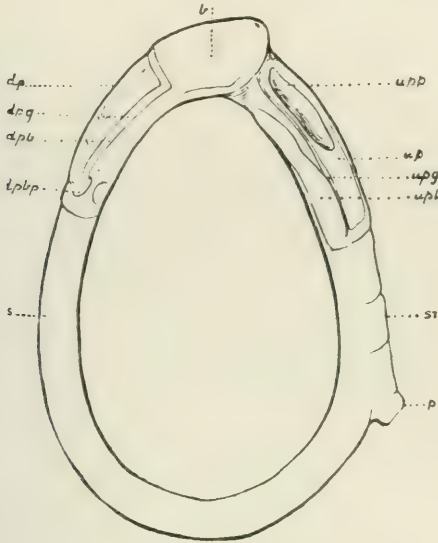


FIG. 46.—Schematic drawing of a stone
“collar,” slender type.

<i>b.</i>	Boss.	<i>dp.</i>	Decorated panel.
<i>dpg.</i>	Decorated panel groove.		
<i>dplp.</i>	“ “ “ border.		
<i>dplp.</i>	“ “ “ perforation.		
<i>up.</i>	Undecorated panel.		
<i>upp.</i>	“ “ “ pit.		
<i>upg.</i>	“ “ “ groove.		
<i>upb.</i>	“ “ “ border.		
<i>sr.</i>	Shoulder ridge.	<i>p.</i>	Projection.

and present a number of features which have been given specific names, as shown by the accompanying schematic drawing of a typical specimen (Fig. 46). Points to which I would call particular attention are the “decorated panel,” the “shoulder-ridge” and the “projection.” Professor Mason recognized that the shoulder-ridge, taken in conjunction with the projection, “faintly resembles a

lashing of two ends of a hoop," and it seems probable that these collars are "translations" into stone of some object originally made in wood. A specimen unique in form, illustrated in Pl. XVIII, 1, supports this view. Here instead of a shoulder-ridge we have two knobs so arranged that the collar resembles, not a hoop with the two ends lashed together, but one formed by hooking a projection on one end over a similar projection on the

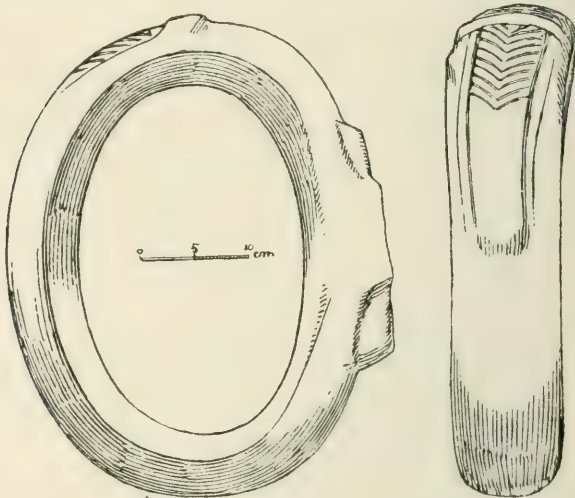
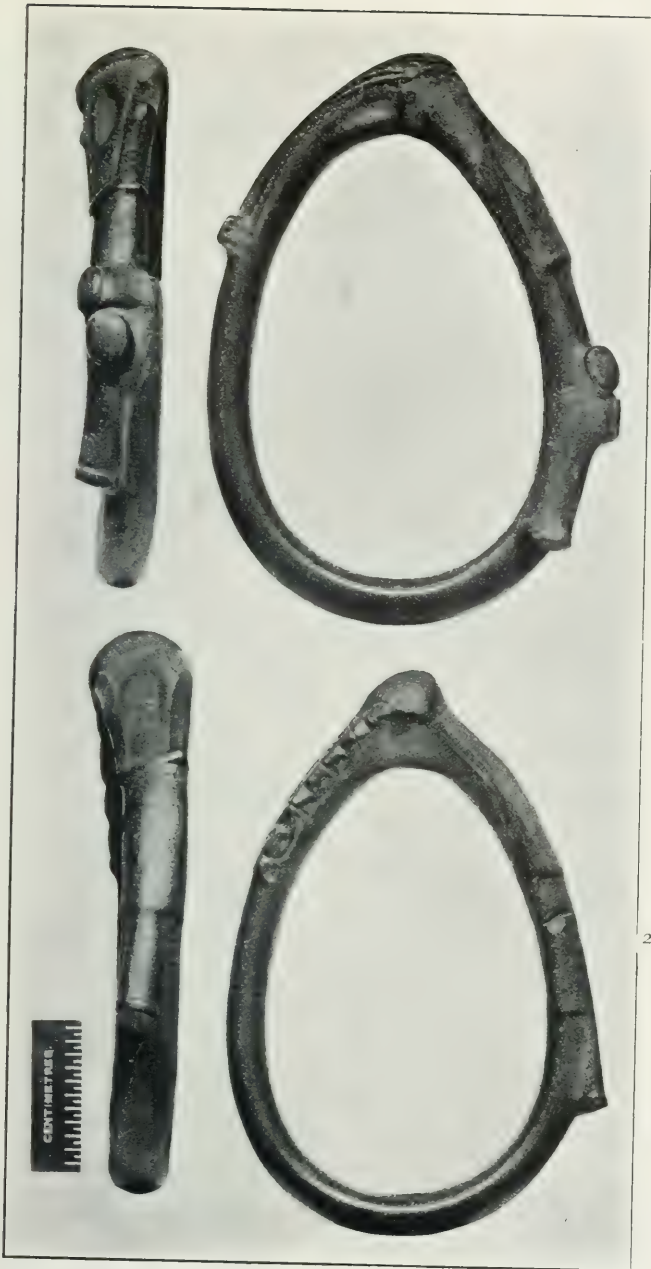


FIG. 47.—Stone "collar," massive type. *British Museum.*

other, the two ends overlapping and shown clearly resting one upon the other. I have elsewhere suggested that the "retranslation" of these objects from stone to wood would be the following. We must imagine the fork of a young tree or a branch cut off immediately below the point where the two ends diverge (the boss); the two ends are trimmed to unequal lengths, and the longer bent round so as to overlap the shorter, the end of which is represented by the projection. The two are then secured in that position by a cotton bandage, represented by the shoulder-ridge. These slender collars,



GREATER ANTILLES
STONE "COLLARS"; PROBABLY PORTO RICO

Dr. S. B. Mearns

as may be seen, are asymmetrical objects, and, while the features noted in Fig. 46 occur in most, they are sometimes found on the reverse sides. This inconsistency would be explained by variations in the form of tree from which they were cut. The hoop constructed, strips of bark would be removed to form the panels, and designs carved upon the decorated portion. The massive collars (e.g. Fig. 47) are simpler in detail, but they nevertheless show a decorated panel, a shoulder-ridge and a projection. In this case it would seem that the prototype was a single, stouter, stem bent round and secured in similar fashion by a bandage. It seems almost certain that these objects must be connected with religion. It is hardly possible that they were ornaments, for instance. They have been found in considerable numbers, "about a hundred" from Porto Rico alone, and, had they ever been worn, round the neck or otherwise, they would hardly have failed to attract the notice of the early visitors. We have seen that tree-worship was common in the Antilles, and since the three-pointed stones seem connected with the yucca-plant, the conical projection perhaps representing the root, it is possible that the collars, another vegetal form, represent a tree-spirit. It is not impossible that the hoop-form may have been adopted in order to prevent the escape of the supernatural inmate, for the practice of enclosing a spirit in a circle is by no means uncommon in the rest of the world. The stone-form would be adopted in order to provide a more precious and abiding habitation. The designs on the decorated panels of the slender collars are interesting, and Fewkes has collected a series which shows that a number of them present similar features modified in certain ways. These features are explained to some extent by the ornament on a magnificent specimen of a massive collar (Pl. XIX) of which the ornament is unusually elaborate. Here we have a human head, furnished with large circular ear-orna-

ments, and provided with arms. The ornamented space on either side is divided horizontally into two portions, the upper representing, I believe, the legs of the figure whose head forms the central feature, the lower presenting merely formal ornament to occupy the space. Between the arms below the head is a small pit probably representing the umbilicus. In Fig. 48*a*



FIG. 48.—Designs from stone "collars."
After Fewkes.

taken from a slender collar we have a modification of this design. Here is a head between two legs, but the arms and ear-ornaments have disappeared, and the umbilicus has become a series of concentric circles, separated from the head and included in the formal ornament below. In Fig. 48*b* the process of degeneration has advanced further; of the face only the two eyes are left, and they are divided by a median groove and merged with the remains of the limbs on either



Met. Museum, New York

GREATER ANTILLES
STONE "COLLAR," MASSIVE TYPE
(Scale: 1/7 lbs.)

side. The umbilicus persists as the central part of the formal ornament. In Fig. 48c all human semblance has disappeared, though the main features can be traced, and the umbilicus is duplicated and placed at each end of the formal panel. It would seem probable that, just as the anthropo- or therio-morphic carving on the three-pointed stones may represent the spirits presiding over the growth of the yucca, so the carving on the decorated panels of the collars may depict the tree-spirit. As to the meaning of the undecorated panel on these objects I am unable to offer a suggestion, though the fact that it is left rough would seem to suggest that some object was fastened to the collar at this point. As regards the peculiar objects known as "elbow stones" (Fig. 49), I am inclined to believe that they furnish additional evidence concerning the wooden origin of the collars. An elbow-stone resembles the pointed end of a slender collar, of which the shoulder portion with its ridge and projection has been broken away. In place of the undecorated panel it usually shows a decorated panel, and, though the ornament is slightly different in being more realistic, it usually consists of a human face or figure. The two ends of the elbow are usually ribbed transversely, and often one is furnished with a perforation or a longitudinal groove, or both. These features suggest that they have thereby been prepared for the attachment of some other object, and I would suggest that the missing element is a wooden hoop. If



FIG. 49.—Stone "elbow-stone";
Porto Rico. *Heye Museum,*
New York. After Fewkes.
Scale $\frac{1}{2}$.

this were supplied, the complete object would correspond to a stone collar, and indeed would stand midway between one of these objects and the original wooden form. In this connection I would call attention to Fig. 49, where the carving represents a human figure whose legs are sculptured in the same form as the appendages, which I have already designated legs, on

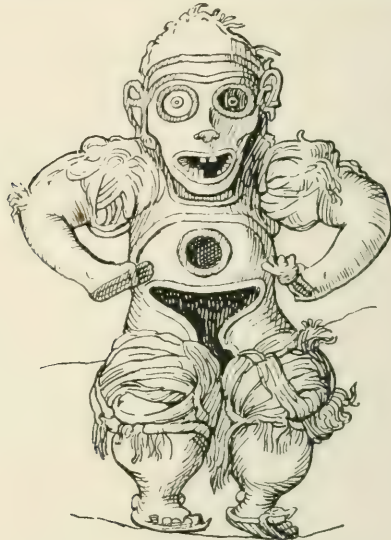


FIG. 50.—Cotton *Zemi*; Santo Domingo.
After Cronau.

either side of the ear-ornaments attached to the head in Pl. XIX. Some of the elbow-stones, it is true, show only a face, but, even so, that face is invariably carved in far less conventional form than on the stone collars. So, if my contentions are granted, the elbow-stones take their place, both in form and ornament, as an intermediate step in the transition from wood to stone. However, these questions are highly problematical, and it will be best to return to the information concerning Tainan religion which may be collected from the early

literature. All that need be said in addition on this subject is that, like the three-pointed stones, the collars also appear to be confined in the main to Santo Domingo and Porto Rico, the number from the latter island being far in excess of that found in the former. One or two have been discovered in the Lesser Antilles, but these in all probability have been imported thither.

As stated above, besides the worship of various powers of nature, the Tainan also paid reverence to their ancestors. Both in Cuba and Haiti Columbus occasionally found a skull in a hut, carefully stored in a basket. These were most probably ancestral zemi, and indeed Las Casas makes the suggestion of Cuba, that, as the huts where such relics were found were larger than the rest, the skulls were probably those of common ancestors. Pane tells us more definitely of the people of Santo Domingo that for zemi "some have their father, mother, kindred and predecessors." In some cases the skulls or bones were made up in cotton parcels, which

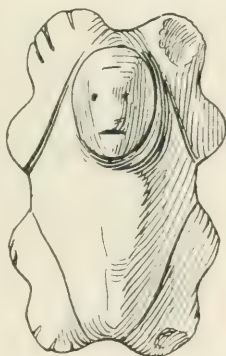


FIG. 51.—Stone figurine.
British Museum.

occasionally were given a human form (Fig. 50). The zemi of this class were consulted through the medium of a priest, and were believed to give advice on all subjects touching the welfare of their descendants.

The amuletic zemi seem to have been for the most part of stone, and in the form of small anthropomorphic figures (Fig. 51). These, both in Cuba and Santo Domingo, the native warriors bound to their foreheads when entering a fight.

Each Cacique in Santo Domingo had a well-built hut situated a little distance from the rest of the settlement in which the various zemi were kept. There, too, was a well-carved wooden "table," made "like a dish," on

which was the powdered tobacco which was laid on the head of the zemi and snuffed through a hollow cane shaped like a Y, the two upper branches being inserted in the nostrils. It is probable that some of the wooden figures, which are furnished with a kind of "canopy," are examples of these tables (see Pl. XXI, p. 218). A description of one evidently important public religious ceremony has come down to us, which clearly was held in honour of the powers presiding over agriculture. For this the Cacique would appoint a day, making the announcement by means of messengers. The people assembled in gala dress, the men painted red, black and yellow, and decorated with the feathers of parrots and other birds of bright plumage. The women were not painted; those who were married wore a loin-cloth, but the unmarried were nude. All had their arms and legs, from the knee down, covered with shell ornaments which rattled as they moved. The Cacique entered the zemi hut, where the priests were decking the idol, and sat down at the door, playing on a wooden gong. The populace advanced, the men first, dancing and singing, and, after thrusting sticks down their throats in order to produce vomiting (by which they were supposed to attain a condition of ceremonial purity), they sat down before the zemi and commenced a chant. Then certain other women entered, bearing baskets of bread ornamented with garlands, and went round the singers, repeating "a little prayer." This was answered by the audience, who rose to their feet, and afterwards commenced a song in honour of the Cacique and his ancestors. During this performance the bread was offered to the idol and then distributed by the priests among those present, who took it home and carefully preserved it until the next year as a powerful amulet against fire and hurricanes.

The priests were called *Bubuitibu* or *Bobuti*, or some similar name—there are a number of variants given—

and their religious and medical knowledge was contained in certain old songs of which they were the guardians. They wore no special form of dress, but were distinguished by a figure of a zemi which was painted or tatued upon their bodies. Their chief function was to act as intermediaries between man and the unseen powers, and to communicate the will of the latter, which was expressed to them while in a state of ecstasy produced by immoderate use of tobacco-powder or -smoke, inhaled through a tube as described above. In some cases the answer of the zemi was guessed from the demeanour of the priest while under the influence of the drug ; if he danced and sang it was considered a good omen, but if he wept the response was believed to be unfavourable. At other times he would fall into a trance, and announce the divine communication when he had recovered. If the result were good, the enquirers would go their way joyful and singing, but if it were bad, they would depart in tears, with hair unbound and casting away their ornaments, with the intention of attempting to propitiate the unfavourable power by strict fasting. The Cacique also was supposed on certain occasions to be able to commune with the zemi. When they sought to know what the issue of a war would be, the Cacique and chief men would repair to the zemi-house, where prayers and tobacco were offered by the former, the rest maintaining silence. After this the Cacique would stand awhile "with his head turned about" and his arms on his knees. Finally he would lift his head and look towards the sky and speak. The rest "then all answer him with a loud voice, and when they have all spoke, giving thanks," he related the vision which had appeared to him while under the influence of the tobacco. The importance of tobacco in religious ceremonial is shown by the fact that it was known by the same word, *cogioba*, as prayer, and to pray and to offer tobacco were

alike called "making cogioba." Another method of ascertaining the will of the supernatural powers is given by Pane when speaking of the Cacique Cavizza, mentioned above (p. 184), "who kept a sort of abstinence here, which all of them generally perform." This consisted in shutting himself up in a hut for six or seven days, taking no food but the juice of a certain herb, "with which they also wash." Visions would appear during the fasting, "which they do in honour of the zemi and to know whether they will be victorious, or to acquire wealth or any other desire." It was while performing this ceremony that the Cacique Guarionex was supposed to have received a prophecy that in a short time white and bearded strangers would come, who would destroy the zemi, and would carry long implements of a peculiar material with which they could cut a man in two.

Some of the zemi, however, held direct communication with the worshippers, since they were said to "speak," no doubt by means of some such mechanism as was accidentally discovered by the Spaniards. In the Cacique's hut they found a zemi, which was furnished with a tube leading from the head to a screened corner of the dwelling. The Cacique confessed that he was in the habit of delivering down this tube oracles, which thus appeared to issue from the mouth of the zemi. He begged the Spaniards not to reveal the deception as he found it very useful in controlling his subjects and in exacting gifts from them!

To return to the priests, one of their chief functions was that of healing the sick. They were expert herbalists, and many of their remedies were of real value, but they relied for the most part upon trickery to gain the confidence of their patients. There were local variations in treatment, but the principal features were the use of tobacco and the application of massage. Sickness was regarded for the most part as due to the

anger of some zemi, to whom the sufferer had, perhaps unwittingly, given offence, and who had shown his displeasure by miraculously inserting some foreign body in the anatomy of his victim. It was first necessary to ascertain the reason of the malady, and for this the patient was brought to the doctor, who endeavoured to attain a sort of physical sympathy with him by adopting the same diet and by dressing as far as possible on the same lines. Both doctor and patient were freely dosed with tobacco, and the priest during his state of ecstasy was supposed to hold converse with the zemi and ascertain the cause of the sickness. In serious cases the priest would visit the invalid, having prepared himself by blacking his face and concealing in his mouth a pebble or small bone wrapped in flesh. All children and unnecessary individuals were turned out of the hut, and strict silence was preserved. The priest purified himself by taking an emetic, prepared from a certain herb wrapped in the skin of an onion, and then seated himself in the middle of the hut with the patient, and proceeded to massage his limbs in a downward direction, as if forcing something from his body. Then pretending to hold something in his hands, he ran to the door and cast it out, exclaiming, "Begone to the mountains or the sea." Returning to the sufferer, he proceeded to suck at certain parts of his body, finally producing the object which he had concealed in his mouth, and which he triumphantly displayed as the cause of the trouble. If it were a stone, it was believed to be a charm of great value, especially serviceable in childbirth, and was kept wrapped in cotton and given portions of the owner's food, like the other household zemi.

Should the patient die it was sometimes a serious matter for the doctor, especially if the deceased had powerful relations. In this connection there was a highly interesting magical ceremony, by means of which it was believed possible to discover whether the doctor

was to blame. Parings of the deceased's nails and hair cut from his forehead were pounded together with the juice of a certain herb, and the mixture poured down the mouth and nostrils of the corpse. The body was then returned to the grave, or laid upon the embers of a large fire, and covered with earth. By the virtue of the magical draught, he was then supposed to come to life, and would answer ten questions from the grave or fire. If he incriminated the priest, confirmation of his words was supposed to be given by the smoke of the fire when it was uncovered, since it was believed to rise to the sky and then, turning downwards, to enter the hut of the culprit and afflict him with skin-disease. If the guilt of a priest was thus proved, he would be kidnapped by the relations and beaten, but he could not be killed unless he were mutilated in a certain way, as snakes would come and lick his wounds so that he recovered after two or three days.

The Tainan believed that the soul survived the body, and departed to a sort of "heaven," where it lived a life which was a sort of glorified edition of its earthly existence. Most of the chiefs, so we are told, claimed that the entrance to the underworld lay in their territory, a certain spot in the district of the Cacique Cayonabo, the region of L. Tiburon, and the Island Soraia being specially mentioned. The heaven in the last-named locality was called Coaibai, and was ruled by a ghostly Cacique, Machetaurie Guaiva, who was the first inhabitant of it. The souls of the dead were supposed to wander about at night, feeding on mammy-apples, which were therefore forbidden to the living. If a living man met a ghost at night it was important that he should show no fear, as the spectre would then vanish. If however he proved a coward it would assault him. Dead souls were easily distinguished from living beings by the fact that they possessed no navel; they were supposed to play the part of *incubi* and

succubi, vanishing as soon as their victims became aware of their presence. A distinction in name was made between the soul of a living man and the soul of a dead, since the former was called *Gociz*, the latter, *Opia*. The Lucayans believed that the soul first went off in a northward direction, to a kind of purgatory of ice and snow mountains, and then travelled southward until it reached paradise. The Spaniards on one occasion turned this belief to account. Persuading the natives that they would take them southward to their paradise, where they might rejoin their deceased relations, they carried them off to slavery in Santo Domingo to the number of some forty thousand. In Cuba it was thought that the condition of a man after death depended upon his conduct in this life, but this belief does not appear elsewhere. The Cubans also possessed the tradition of a fountain of perpetual youth, which was thought to exist on some other island. Legend usually placed it in the Bahamas, and Charlevoix states that on the island of Bemini in this group there were the remains of a Cuban village.

The religion of the Carib seems to have been similar in essentials, though it differed slightly in details. No actual creation-legend is reported, but they believed that their ancestors originally lived on herbs in the woods, like beasts, and had no knowledge of cultivation. Upon them in this benighted state descended a white man from the sky, who taught them the use of stone implements, instructed them in hut-building and agriculture, and gave them cassava with injunctions how to prepare it. There was some idea too of an almighty sky-god, but since he was good, no actual worship was paid him. The rainbow was supposed to be a supernatural being called *Juluca*, covered with resplendent feathers; only a portion of his body could be seen, since the rest was covered with clouds. The rainbow was hailed as a good omen at sea, but was feared when on

land. The chief objects of their cult were various lesser spirits, good and bad. The good spirits were very numerous, and each man worshipped one in particular ; they were not regarded as universal creators, though they were supposed to have produced the islands, and to preside over the growth of the food-plants. Special tables, provided with the best food, were set for them at feasts, their features were painted on canoes, and their images worn round the neck, but they were not honoured with special temples. According to de Poincy, gifts of first-fruits were made to them, and cassava and wine were offered, especially after recovery from sickness. The offerings were placed at one end of the hut, on one or more tables, called *matutu*, woven of reeds and palm-leaves. Each man could make his own offering, but, if it were desired to invoke the spirit in order to obtain an oracle, the services of a priest were necessary. Priests were called *Boye*, and boys destined for the office were apprenticed at an early age. They had to prepare themselves for their profession by strict abstinence from certain kinds of food, by frequent fasts, and severe scarification. Invocation of a spirit was usually made with one of four purposes : to obtain vengeance on a foe, to ascertain the result of war, to obtain assistance against the spirit of evil, or to discover the reason of a malady and to learn the issue. Each *Boye* was devoted to the service of a particular spirit, and it was necessary to select the right one. The spirit was summoned by chants, accompanied by tobacco-smoke, and the proceedings took place at night. The spirits made their appearance in many forms, vessels would be heard to move, and the sound of teeth grinding, as if the supernatural visitor were devouring the offerings. The latter were, however, always found to be unconsumed, but were regarded as holy, and might only be tasted by men of rank in a state of ceremonial purity. Traces of ancestor-worship may be seen in the statement that the

spirits often resided in bones dug from the graves and wrapped in cotton. Such bone bundles were also oracular, and moreover were used to bring harm upon an enemy. For this purpose some object belonging to the intended victim was included in the parcel. No doubt many of the bundles of bones found by the first explorers, and taken by them to be relics of cannibal feasts, were "zemi" of this class. The evil spirit was known by the name of *Maboya*, and was supposed to cause thunder, of which the natives were much afraid. De Poincy states that no offerings were made him, though small images were carved in some form under which he had appeared, and were worn round the neck. However, as will appear below, the first part of the statement does not seem to be correct. During an eclipse of the moon it was thought that *Maboya* was devouring the satellite, and night-long dances were organized to the sound of gourd rattles; his presence was often associated with a bad smell. The Carib were clever herbalists, and knew many remedies for various ills, including snake-bite. They were jealous of their knowledge and did not part with it readily. Besides the vegetable remedies, taken internally, scarification was often applied to the seat of pain, and the properties of the sweat-bath were also known. But sickness was often attributed to a spirit invoked by an enemy, and the patient had recourse to his own guardian spirit to discover the offender. This custom frequently gave rise to bitter feuds. To invoke the spirit the hut was cleaned, and the table made ready with its offerings of cassava and wine (these offerings were termed *anakri*) for *Maboya*. At the other end were seats for the participants in the ceremony. At night the fire was extinguished, and the Boye arrived, finding his place by the light of his cigar. He muttered charms, stamped several times with his left foot, blew five or six puffs of smoke, and then rubbed the cigar between his hands and

scattered it. Upon this, the spirit appeared with a great noise, and replied to the questions put to it. If the illness was declared to be curable, the patient was massaged, as among the Tainan, and a stone was apparently extracted from his body. After this he was rubbed with juniper-fruit, which stained his skin brown, the colour of health, and the cure was supposed to be complete. The Carib believed that a man had as many souls as there were pulses in the body, but that the principal one resided in the heart. The soul after death was supposed to go to a kind of heaven, in company with its tutelary spirit, where it lived much the same life as on earth, served by the slaves which were killed at the funeral of its body. Some souls however went seaward, and were believed to cause shipwrecks; these were known by the name of *Umeku*. Others again haunted the woods and were called *Maboya*. The souls of brave warriors went to certain fortunate islands, a kind of paradise, where they were served by Arawak slaves; but cowards lived a life of servitude under the control of Arawak masters in dreary deserts beyond a range of mountains.

CHAPTER X.—THE WEST INDIES
AMUSEMENTS, BURIAL, FOOD AND
HABITATIONS

FROM the religion of the islanders one turns naturally to the subject of their recreations, for, as among many primitive peoples, these frequently had a semi-religious character. Of their amusements the most important was the dance. Dances were organized at practically all social gatherings, and were invariably accompanied by songs. In fact the song was practically regarded as inseparable from the dance, and to both the same name, *areito*, was given. In these songs was perpetuated tribal history, though the chants themselves were not very permanent, since we are told that they were changed at the death of a Cacique. Yet this statement cannot relate to all the songs, since elsewhere we learn that they were handed down from father to son, and that they were used as a means of preserving genealogies. The dances were performed by both sexes revolving in a circle; some of the *areito* were peculiar to men, others to women, but at certain festivals, such as those held in celebration of a victory or the marriage of a Cacique, the sexes intermingled freely. There was usually a leader, who commenced the *areito*, and the rest repeated his words and steps; the performers were supplied with unlimited draughts of the native liquor, and the proceedings often lasted until drunkenness put an end to them. Scillacio describes a dance performed by women as follows: "Several women at once, having their hair confined under

wreaths and turbans, start off from the same line, sometimes with an ambling, sometimes with a slower movement. The plates of metal which they wear attached to their fingers are mutually struck against one another, not merely in sport, but for the purpose of producing a tinkling sound. They accompany the sound with a voice not deficient in modulation, and singing that is not wanting in sweetness; and in a gracefully voluptuous manner, through winding mazes, execute a languid dance in beautiful order, with multiform involutions, while no one claims a conspicuity above her companions. . . . Being at last both excited and fatigued by the sport, they hurry forward with equally accelerated steps, and in a more petulant and frolicsome mood, and with voices raised to a higher pitch, finish their dance." On the occasion of a festival of this nature, the participants would assume all their finery, such as is described on p. 194. The principal instrument of music, if such a term may be used, was a wooden gong, cylindrical in shape, and hollowed out by means of fire and stone axes. In the upper surface two rectangular tongues were cut free, and in the under was a rectangular aperture through which the interior had been extracted. In fact these gongs corresponded exactly in pattern to the Mexican *teponaztli*,¹ though they were usually larger in size, being in fact big enough "to contain a man." They were sounded in the same way, the tongues being struck with sticks, and it is said that the Cacique was usually the musician. The gong however was not the only instrument; gourd rattles were also employed, as well as "timbrels made of the shells of certain fishes, which timbrels are called Maguei." Another kind of gong is described as the instrument to which the priests recited their religious chants. The name of this was *maiobavan*, and it is described as being "hollow, strong, yet very thin, and as long as a man's

¹ See *Mexican Archaeology*, Fig. 31, p. 167.

arm ; that part where they play on it is made like a smith's tongs, and the other end like a club, so that it looks like a calabash with a long neck."

Apart from the areito, the principal amusement of the Tainan was the ball-game, *batos*. This was a favourite form of sport and was played in a specially cleared "court" attached to the village. The ball was made from an elastic black substance obtained by boiling the roots of certain trees and herbs, according to Oviedo ; what this material could have been is rather difficult to determine in the face of Stahl's statement that there is no natural vegetable product in Porto Rico which could furnish a ball of this nature, but the account would seem to suggest some variety of rubber. The players were divided into two sides, which might consist of any number of players, and, after the ball was thrown, it had to be struck backwards and forwards from side to side by some member of each side alternately. If the ball fell "dead," the side whose turn it was to strike lost a point. In this game the hands were not used, but the ball was struck with the head, shoulder, elbow, or, most often, the hip and knee. Thus the recreation corresponded very closely with the Aztec game *tlaxtli*, which however was played in stucco-lined courts.¹ Both men and women joined in the game, the sexes sometimes playing separately, sometimes one against the other, and inter-village contests were frequent. When playing, the married women of rank, who usually wore long skirts, changed these for a shorter pattern reaching only to mid-thigh. Round the ball-ground were placed stone seats for the ordinary spectators, while the Caciques sat upon special carved stools of wood. In many places in Cuba, Santo Domingo and Porto Rico there are level spaces, enclosed by a ring of stones, which are still called by the natives *Juegos de bola*, or *Cercados de los Indios*. One of

¹ See *Mexican Archaeology*, p. 165.

these in Santo Domingo is described by Schomburgk as follows: "The circle consists mostly of granite rocks, which prove by their smoothness that they have been collected on the banks of the river, probably at Managua, although the distance is considerable. The rocks are mostly each from 30 to 50 lbs. in weight, have been placed close together, giving the ring the appearance of a paved road, 21 feet in breadth and, as far as the trees and bushes which had grown up from between the rocks permitted one to ascertain, 2270 feet in circumference. A large granite rock, 5 feet 7 inches in length, ending in obtuse points, lies in the middle of the circle, partly embedded in the ground. I do not think its present situation is the one that it originally occupied." Fewkes writes of Porto Rico: "The ball-courts . . . were situated for the most part on terraces or on land fringing rivers, elevated high enough to be above freshets, and yet lying in river-valleys that could be cultivated. The centre of the enclosure is ordinarily lower than the surrounding plain. In most instances the alignment of the stones has been disturbed, and none of these structures which has been examined has an unbroken surrounding-wall. As a rule only a few of the stones which once composed them now stand upright. Many of these structures are now found in the mountains, but there is evidence that in prehistoric times they were most numerous on the coastal plains." Outside the boundaries of these courts there are almost invariably a number of artificial mounds, in which burials have been discovered. From this fact we may conclude that, while there seems to be every reason to believe that the courts were used for the ball-game, there is equal reason to suppose that they served also as arenas for ceremonial dances, particularly those connected with the rites performed in honour of the dead.

The musical instruments of the Carib appear to have been a little more varied. De Poincy mentions drums

furnished with hide membranes, calabash rattles, whistles made from a bone of a slain foe, and an instrument with a single string and calabash resonator. Their songs included chants defying their enemies, verses relating to birds, fish or women, and satirical compositions. They were very fond of the dance, which corresponded in essentials to that of the Tainan, and on festal occasions decked themselves in all their finery, often applying tufts of down to their bodies by means of gum, like the Chorotega (see p. 24). Dances, accompanied by feasting, took place at the Carbet, or communal house, and were announced several days in advance, in order to allow the women to prepare a large stock of cassava beer (of a stronger brand than that normally consumed), and the men to catch fish and iguanas. A number of occasions are mentioned as appropriate to a feast of this nature, such as when a war-council was held, at the return of a warlike expedition, at the birth of an eldest son, when a child's hair was cut, when he reached puberty, or became of military age, when land was cleared for planting, or a new canoe launched, to celebrate a recovery from sickness, at the death of a parent or husband or wife, on the attainment of high military rank, or after killing an Arawak. As a minor form of amusement the Carib were in the habit of keeping parrots as pets, which they taught to talk.

As regards the methods of disposing of the dead among the Tainan, we are told that at any rate in Haiti there was considerable local variation in the customs. Moribund individuals were sometimes strangled when at the last gasp, and in some places it was the custom to carry a man who was dangerously ill before the Cacique, who decided whether he should be despatched summarily after this fashion, or should be allowed a chance of recovery. Sometimes a sick man was abandoned in his hammock in the bush, with a little food and water,

or was allowed to perish in solitude in his hut. Sometimes again dead Caciques were burnt in their own huts, or buried in a cave or in a grave in the open which was marked by a mound. When the body of a Cacique was prepared for burial it was, at any rate in some cases, eviscerated and dried over a fire. After this it was wrapped from head to foot in cotton bandages, and placed in a grave dug in the earth. Here it was arranged in a sitting position on a wooden stool, and protected from the superincumbent earth by a wooden roofing. Two or more of the favourite wives of the deceased were buried alive with him, being provided with a calabash of water and a portion of cassava. The victims were supposed to go to their death willingly, but force was used if they proved refractory. In some cases it was said that the chief designated beforehand the women whom he desired should share his tomb, but in the case of the Cacique Behechio, his sister Anacaona selected the most beautiful of his wives, and could only be induced to content herself with one victim through the energetic representations of the Spanish Friars. Sometimes, as has been stated above (p. 201), the head of the deceased, especially if a person of importance, was removed, and kept in a basket as a much-valued zemi. The ceremonies which accompanied the burial of a Cacique lasted some fifteen or twenty days, and were attended by a large concourse, including the neighbouring chieftains. The life and deeds of the deceased were celebrated in song, and various dances were performed, doubtless in the open spaces which also formed the arenas for the ball-game. The most valued property of the dead was buried with him, and much of the rest was distributed among those who were present at the ceremonies.

Burial caves have been discovered in some numbers throughout the Greater Antilles and Bahamas, together with the vessels that no doubt contained the mortuary

offerings, while the latter have also been found in such burial-mounds as have been opened, notably the tumuli seen in the neighbourhood of the ball-grounds of Porto Rico. In Jamaica, practically all the human remains have been discovered in caves all round the island, but usually not far from the sea. In one cave at Halberstadt, the mouth of which was closed by loose boulders, a number of skulls and other skeletal parts were found arranged in a row beneath the remains of a canoe. At least thirty-four individuals were represented by these remains, though most of the caves used for mortuary purposes seem to have been small, and capable of containing not more than at most a dozen living persons. Apart from the cave mentioned above, the remains are for the most part found scattered over the floor or deposited on ledges in the cave-walls, while numbers of pottery vessels, of various sizes, and fragments accompany them. There seems to have been no intentional inhumation, and in many cases the skull is discovered resting in one of the larger vessels. Many of the smaller pots show signs of fire, and were probably ordinary cooking-vessels used to contain the offerings of food deposited with the dead. At any rate, there are no indications that the Jamaican caves were ever inhabited. Apart from the use of pottery vases as receptacles for skulls, a cave was discovered in the Red Hills, four miles from Guanaboa, in St. John's, in which the bones of men, women and children were found enclosed in a number of large oval reddish pots. This find suggests the practice of secondary urn-burial, which we know was practised by the Arawak and Carib tribes of the southern continent,¹ and the remarkably good condition of many of the larger bones in other caves seems to imply that the bodies had not been allowed to undergo complete decomposition in the position in which they were found.

¹ See *South American Archaeology*, pp. 268 and 270.

As regards the insular Carib, im Thurn furnishes evidence that urn-burial was also practised by them, in his statement that pottery vases containing bones have been found on a small island called Balliceaux, off St. Vincent, which was used as a cemetery. But simple inhumation was also practised, at any rate on St. Vincent. Here loud lamentations were raised as soon as death became evident, the corpse was washed and painted red, and the hair oiled and combed. The body was arranged in a contracted position, with the elbows between the knees and the face on the hands, and was enveloped in a new hammock. A circular grave was dug, some four or five feet deep, and in this the body was placed, seated on a small seat. The grave was usually dug in the hut itself, but if a spot was selected in the open, a small shelter was constructed over it. Before the grave was filled in, a large fire was kindled around it, and this was surrounded by a double circle of old men and women, the former standing behind the latter, who uttered lamentations and invoked the dead. For a few days the spot was visited daily by the relations and chief friends of the deceased, who brought offerings of food, and renewed their lamentations. Finally, at the last visit, the weapons and ornaments of the deceased were placed by his side, a plank was arranged across the grave above his head, and the earth was filled in. In some cases, especially at the funeral of an important man, some of his slaves were killed, to be his servants in the other world, though not infrequently they would escape to another island in order to avoid this fate. After the ceremonies were concluded, the nearest relations would cut their hair and observe a fast, in the pious hope that thereby they would be granted longer and happier lives. Still later, another visit was paid to the grave, and a feast was held there, after which no further attention was paid to it. Part at least of the property of a dead man was burnt on the occasion of his obsequies. To

glance for a moment at the neighbouring coast of South America, we find that in Paria the bodies of prominent men were dried on a frame over a slow fire and preserved as household gods, just as in eastern Panama (see p. 111). This practice seems to find an echo in the Tainan custom of drying the body by similar means, and in the preservation of the skull as a zemi, a practice which appears to have been shared by the insular Carib also.

The principal food of the islanders as a whole consisted in the main of maize, cassava, yams, batatas, fruits of several kinds, conies (*utia*), birds, iguanas, fish and shell-fish, and a number of creatures not usually esteemed as food-animals, such as snakes, bats, spiders and worms. The vegetable sources of supply were the most important, apart from fish, and relatively extensive plantations were observed on most of the islands at the time of the discovery. In Cuba a certain proportion of the population consisted of expert agriculturists, considering the limited means at their disposal, though in the mountains were naked cave-dwellers, who supported life merely by collecting various natural produce. On the south coast the natives lived mainly by fishing, and occupied a cultural position midway between the other two. In some of the islands irrigation was practised, and the remains of trenches cut for this purpose have been observed in Cuba and many parts of Santo Domingo, though they have not been reported from Porto Rico or the Lesser Antilles. For maize, the ground was cleared and the *débris* was burnt, the ashes being left on the soil. This was the work of the men, while the women saw to the planting, each armed with a pointed stake and a bag of grain, which had been soaked in water for a day or so before, suspended round the neck. The workers moved along in a row, and at each step made a hole in the ground with the digging-stick, casting in a few grains with the left hand and

covering them with the foot. The harvest was generally ripe in about four months, though some varieties of maize took no more than two to come to maturity; meanwhile the growing crop was guarded by the children from the depredations of birds. To obtain cassava, slips of the yucca plant were embedded in mounds, or sometimes in the level ground, and left to germinate. In this case the process took longer, and it was usually two years before a plantation came into full bearing. Batatas and yams were also cultivated in mounds, and the Carib planted fruit-trees round their huts. Both from the maize and the yucca, varieties of "bread" were prepared, though maize was eaten raw when young and tender, and roast at a later stage of growth. The grain was soaked in water and pounded by means of stone pestles (Pl. XX) into paste, which was made into loaves, wrapped in reed-leaves, and cooked with a very little water. Bread of this kind lasted only a couple of days, after which it became mildewed. A superior variety for the use of chiefs was made from meal which had been ground very fine, and from which the husks had been picked, washed in water. This was moulded into cakes and cooked in a pottery vessel over a slow fire. According to Benzoni it was very good when fresh and hot. The yucca demanded a more elaborate treatment, in so far as the juice was poisonous in its natural state. The skin was removed from the tubers by means of shells or scrapers of turtle-shell or stone; they were then sliced, and, among the Carib, grated, and the resultant mass was placed in long cylindrical basket-work appliances by means of which the juice was expressed. Flat cakes of the paste, of varying thickness, were cooked over a fire on flat griddles of pottery, remains of which are sometimes found, and finally dried in the sun. Cakes so prepared would last for months if kept dry, though they were at their best when fresh. The poisonous juice was preserved and boiled, by which



1



British Museum

3



2

GREATER ANTILLES
STONE PESTLES
(Scale: 1, 1/2; 2, 2/3ths; 3, 1/3rd)

operation it lost its deleterious properties, and was used as liquor for soup. Sometimes it was boiled until its volume was considerably reduced, and then, after being placed several days in the sun to sweeten, it was mixed with other food as seasoning. If the process were repeated it turned sour and made an excellent substitute for vinegar. The preparation of cassava from the yucca-root among the Carib was similar. Pepper too was used as a condiment, and was mixed with most forms of food to what, according to European ideas, would be considered an inordinate extent. Salt was also employed as a seasoning by the Tainan, but not by the Carib, to whom it was tabu. It was obtained in various ways; thus in Santo Domingo on the coast it was procured by boiling sea-water; on the Yaqué River there were regular *salinas*; and in the province of Baynoa, near Lake Xaragua, was a mountain where it was found in crystalline form.

Both maize and cassava were used in the manufacture of intoxicating drinks. From maize the Tainan prepared the beverage known as *chichia*. For this, the grain was ground and placed in jars; to it was added a handful of grains lightly cooked in a pot and chewed by the women (see p. 114), and the whole was boiled in water for several hours, after which it was left to cool and strained through a cloth. Less potent forms of drink were manufactured from honey and various roots and fruits. Maize-beer was also prepared by the Carib, as well as an intoxicating drink, called *ouicou*, from cassava. For the latter, the grated root was boiled and strained, and to it was added a small portion chewed by the women. After being left a day or two to ferment, the process being assisted by grating batatas into the vessels, it was ready for consumption. Sometimes the yucca was kept for several days under a layer of manioc-leaves, weighted by stones; it was then sliced, spread on leaves, sprinkled with water and left for a

night, after which it turned red and fermented freely without the addition of the batatas. The Tainan had become dependent to a very large extent upon agriculture for their sustenance at the time of the discovery, as indeed they found to their own cost. When the Spaniards in Santo Domingo threw off the mask, and their oppression became almost unendurable, the natives attempted to starve them out by refraining from sowing any crop and destroying the stock of vegetable produce already to hand. As a result the consequent scarcity was felt far more severely by the Tainan themselves than by their taskmasters.

Next to the vegetable world, the sea provided the principal food of the islanders. Fishing was everywhere an important industry, and was pursued with nets of vegetable fibre, hooks of bone or turtle-shell, harpoons tipped with bone or shell, and, in the Lesser Antilles, arrows. A good deal of marine produce could be simply picked up on the shore, and the middens which fringe the Jamaican coast are full of sea-shells and crabs' claws, besides the bones and spines of fish and turtle-bones. In Cuba a stock of fish, so it is said, used to be kept in artificial ponds, but the most peculiar method of fishing, also attributed to the inhabitants of this island, is the following: A *remora*, or sucker-fish, which has been furnished by nature with a powerful sucker situated on the top of its head, was caught and fastened to a line, so that it was forced to swim alongside the canoe. When a turtle was sighted, basking on the surface of the water, the canoe approached quietly within measurable distance, and the line was slowly paid out. The fish, according to its habits, would attach itself to the turtle, which could thus be checked and overtaken. Several occupants of the canoe would leap into the sea as soon as the captive was alongside the canoe and lift it on board, upon which the remora would relax its hold and fall off, to be rewarded later with a

piece of the flesh let down into the water by a cord. Fish was usually dried over a slow fire almost as soon as caught, and could then be kept and stored ; the same treatment was applied to the flesh of crocodiles. The manatee was also used as a food-animal, though its bones are rare in the coastal middens ; among the Carib however its flesh was tabued. This people used hooks and arrows as the principal means of catching fish, and the hunter would stand for hours with his bow watching for the appearance of a suitable capture, and would then let fly his arrow and dive after his prey. The Carib were also said to catch fish by diving among the rocks, or by casting into pools fragments of a certain kind of wood, cut small and bruised, which had the effect of stupefying the inmates. Their most favourite dish, according to one account, was a kind of stew, composed of crabs and fine cassava, seasoned with lemon-juice and quantities of pepper.

Hunting too was practised to a certain extent, though the fact that there were no large animals on any of the islands rendered it of considerably less importance than fishing. One of the most important animals, economically speaking, was the *utia*, probably the agouti, of which the bones are found in numbers in the Jamaican middens. It was hunted with small dumb dogs, and extensive communal drives were organized in the dry season when the savannahs were fired for the purpose. These little dogs themselves were eaten on occasions. The iguana was regarded as a delicacy and was carefully cooked. It was first gutted and washed, then rolled and put into a pottery vessel just large enough to contain it. A little water was added, and it was stewed over a slow fire of sweet wood of a kind giving little smoke. Various birds were captured for food ; parrots were attracted to a tree by the cries of a decoy-bird, and were noosed by a boy concealed among the branches. Doves were enticed by imitating their

call, and were captured in nets. But the most ingenious method was that employed to catch water-fowl. In this case the hunter himself took to the water, swimming low, with his head concealed by a gourd in which small apertures had been made. He approached a flock of birds slowly and without arousing their suspicions, since all that could be seen was the gourd apparently floating on the surface. When sufficiently near, he would seize the legs of the birds, one after the other, drawing them rapidly under the water and putting them in a bag which he carried with him.

As regards cannibalism, the question is not very easy to answer. Among the Tainan, however, the practice appears to have been exceedingly rare, and limited to the east of Porto Rico, where, we are told by Peter Martyr, if a Carib man were taken prisoner he was eaten by way of reprisal. A few human bones have been discovered in the Jamaican middens, but these are not accompanied by any signs which would suggest cannibalism, and their mere presence is not evidence that the custom ever existed there. With regard to the Carib there has been considerable dispute, but it is difficult to explain away the evidence which would point to the existence of the habit. It is true that its extent has probably been exaggerated, and the presence of quantities of human bones discovered preserved in the huts may be at least partially explained by the prevalence of ancestor-worship. But at any rate the inhabitants of the Lesser Antilles bore the reputation of being eaters of men throughout the islands, and this especially relates to St. Vincent, Martinique, Dominica and Guadeloupe. As regards the last, the evidence of the earliest writers is difficult to set aside. Apart from the mere discovery of bones, Columbus mentions that the neck of a man was found in process of cooking, and states moreover that boy prisoners were gelded and eaten when they arrived at maturity, adding that boys and

women were considered not to be good food. Ferdinand Columbus relates the discovery of a man's arm which was found roasting on a spit ; and Peter Martyr writes of earthen vessels discovered in the houses filled with the flesh of ducks, geese and men mixed ; one indeed was found on the fire, and contained " faggottes of the bones of mens' arms and legs." The last-named author adds to Columbus' account the further particulars that the entrails and extremities were eaten first, and the rest was pounded and stored. According to de Poincy, writing chiefly of St. Vincent, the practice of cannibalism arose not from taste, but from a desire to satisfy feelings of revenge. A prisoner belonged to his captor, and was kept for a few days in the hut of the latter, secured in a hammock near the roof, during which time he endured an enforced fast. He was then brought out unbound, and was often compelled to submit to torture, which he generally endured unmoved, and even attempted to show his contempt for his captors by insult. Finally he was killed by a blow on the head with a club, and the body was washed and dismembered. Part was boiled and part roasted on a framework, and so constituted the principal dish of a ceremonial feast. The fat was preserved in calabashes, and used later as seasoning on ceremonial occasions. The bodies of slain foes of which the Carib gained possession were eaten on the spot. According to this account it was only the Arawak who furnished the victims. Besides the manatee, which has been mentioned above (p. 215), the Carib did not eat either the pig or the tortoise, the former lest their eyes might become small, which was considered a great disfigurement, the latter lest they might grow heavy and stupid. A rather amusing story is told by de Poincy of how an early French resident in St. Vincent invited a Cacique to dinner and served him with manatee-flesh, a forbidden food according to native custom, which his unsuspecting

guest consumed. Later when his host revealed the trick the chief was horrified, though he said little, but meditated revenge. Shortly after the Frenchman was invited to dine with the Cacique, and discovered after the meal that the tables had been turned, since the dishes which he had enjoyed had been liberally seasoned with the fat of an Arawak prisoner.

Food seems to have been plentiful in pre-Spanish days, and the natives were everywhere generous and hospitable. Among the Tainan, it was a custom to offer refreshment to any casual visitor to a hut, but no details concerning meals have come down to us, save that the natives were not large eaters, and that a Spaniard in a day would consume enough provisions to last an Indian for a week. Of the Carib, de Poincy gives a certain amount of information. Meals were often taken in common in the Carbet, the women eating after the men. Each individual sat on a small stool or squatted on the ground, in front of a small table covered with leaves. The fingers were carefully washed before a meal, and in cooking food care was taken never to touch it except with clean hands. Visitors were usually well received, and each guest was provided with a table and carefully served. In each Carbet was an official host, *Niuakaiti*, who saw that proper attention was paid to them, and, in the case of ordinary visitors, each portion of food was accompanied by a cassava-cake folded in half, which conveyed the meaning "eat what you can and leave the rest." In the case of chiefs and honoured guests the cassava was not folded, by which was expressed the wish to "eat what you can and take away the remainder." Further, the visitor was painted and provided with a hammock in which to rest before the meal, after which he was saluted by the men present.

Apart from the ceremonial use of tobacco (which was carefully cultivated) mentioned above (pp. 194 and 195), the leaf was chewed by the Tainan, or smoked in



Berg & Müller

GREATER ANTILLES

WOODEN IDOL

(Scale: 1/6th)

the form of a cigar. Sometimes, especially at feasts, the partially dried leaves were laid on glowing embers contained in a brazier, and the smoke inhaled through a Y-shaped tube, of which the two branches were inserted in the nostrils. On such occasions the "smoker" would often fall to the ground stupefied, and, if a chief, would be carried to his hammock by his women, any vision which appeared to him while in the state of coma being regarded as a supernatural revelation. Tobacco was called *cogioba* or *cohiba*, and the tube was called *tabaco*; the forked type of the latter was used by chiefs and important men, while the less distinguished were content with a straight variety without branches. Two pipes in bird form have been reported from the Bahamas, but they are of a pattern similar to those found in the mounds of the northern continent and may be wrongly attributed. In any case it would appear that such appliances were unknown in pre-Spanish days.

Fire was produced by friction, the "twirling" method being employed by the Tainan. The "male" stick was of hard wood, and was cut from a suitable tree whenever required; the "female" stick was double, consisting of two rods of soft wood lashed side by side, and was usually carried by the owner wherever he went. De Poincy states that the Carib also made fire by friction, but adds that the "twirling" process was not employed by them. If this is so, the desired result must have been obtained either by the "sawing" method or by the "stick and groove" mode as in many parts of Oceania.

As remarked above, the less advanced tribes in Cuba lived in caves, and Oviedo reports that a rude tribe of cave-dwellers was found in the Guacayarina province of Santo Domingo. In Porto Rico and Jamaica however the caves do not appear to have been used as places of residence. Oviedo states that the huts of the inhabitants of Santo Domingo were of two patterns, and his

statement may be taken as applying to the rest of the Greater Antilles. For the first, and commonest, type, stout posts were driven into the earth in a circle, four or five paces apart, and between these canes were fixed and lashed together with lianas, forming draught-proof walls. The posts supported transverse beams, on which

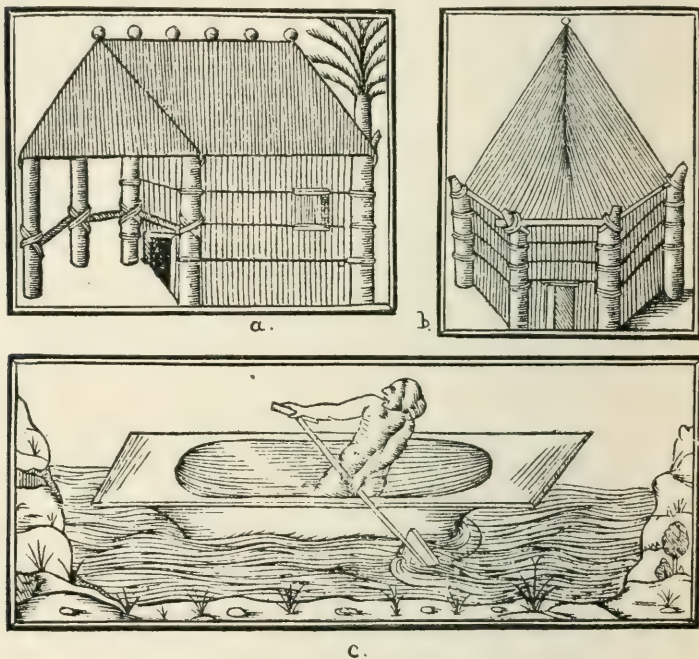


FIG. 52.—*a* and *b*, Types of native dwellings; *c*, native canoe; Santo Domingo. *After Oviedo.*

rested poles inclining inward to form a conical roof. Across the latter cane slats were laid in pairs, a palm's distance apart, and the whole was thatched with grass or palm-leaves. If the house were a large one, the weight of the roof was often supported by a centre-pole. This type of dwelling, which was said to stand the heavy gales best, is figured by the author, whose

illustration is reproduced in Fig. 52*b*. The other pattern (Fig. 52*a*) was larger and better built, and was usually inhabited by a Cacique. It was rectangular, constructed of the same materials, with a ridge-pole supported on forked posts which divided the hut into two. Most of these huts were provided with porticos where visitors were received. Some of the huts at any rate were not devoid of ornament. Peter Martyr describes a village in Porto Rico as follows: The principal building was a large circular hut. "They that measured the house (being made in round forme) found it to be from side to side xxxij great paces, compassed about with other vulgare houses, having in them many beames crosse over, and covered with reedes of sundry colours, wrethed and as it were weaved with marveilous art." Las Casas mentions a dwelling in Cuba, which had two doors and chambers, and of which the inner surface of the roof was plastered with shells. Pile-dwellings were also found in this island, in Santiago Province, at Carahate (Sagua la Grande) and Sabaneque (Remedios). The natives lived in settlements of varying size, scattered along the coast and in the hills, especially in the neighbourhood of rivers, as well as in isolated huts in the mountains. Columbus speaks of the countless small hamlets with numberless inhabitants which he observed in Cuba, and adds that the huts were arranged in no particular order. His son describes a settlement in Porto Rico as a collection of "houses, well-built after their own fashion, with a square before them, and a broad road down to the sea, with towers made of cane on both sides, and the top of them curiously interwoven with greens, as is seen in the gardens of Valencia. At the end of it near the sea was a raised gallery or balcony that could hold ten or twelve people, and well built." The same author states of Cuba that "all that were of one family lived in one house," but what constituted a "family" we do not know.

The principal furniture of a native dwelling, besides pots and other domestic utensils and implements, consisted in hammocks and wooden stools. It was in the West Indies that the Spaniards first made the acquaintance of the hammock, and were much struck by its utility. There were apparently two patterns, one made of a length of woven cotton, the other of string "open-work." They were slung both inside and outside the hut, and if the weather was cold, a fire was sometimes kindled beneath. But hammocks were not the only sleeping-accommodation, for the natives often slept on the ground on beds of leaves. Benzoni, for instance, states that the inmates of a hut slept all together "like fowls," some on the ground and some suspended. The stools, called *duho*, were of some ceremonial importance in so far as the elaborately carved specimens formed one of the distinguishing marks of important men. Important guests were conducted in state to an ornamental seat of this kind, and this compliment was paid the leaders of a party sent by Columbus to visit a Cuban chief. The *duho* are described in the passage recounting the expedition as "seats made of one piece, in strange shapes, and almost like some creature that had short legs, and the tail lifted up to lean against, which is as broad as the seat for the conveniency of the leaning, with a head before, and the eyes and ears of gold." This might almost be a description of the specimen illustrated in Fig. 53, save that the latter is carved from solid stone. Fewkes writes of these seats as follows: "*Dubos*, or stools made of stone and wood, were common in the houses of the Caciques. These objects, consisting of seats supported on four short stumpy legs, generally represented animals, and a head was carved at the upper or lower end. The forelegs often had depressions in the shoulders in which may have been inserted stones, shells or nuggets of gold. The upper surface of the seat, especially the back, was sometimes decorated with



British Museum

GREATER ANTILLES
WOODEN SEAT; S. DOMINGO
(Scale: 1:50)

designs recalling those of the collars and idols, consisting of spirals, circles, triangles, or parallel lines. These stools were probably used both secularly and ceremonially, serving at times as seats of honour in the houses of the Caciques, who themselves occupied *dubos* on state occasions. The dead were often placed upon similar seats. . . . The great care given to the decoration of stools shows how highly they were esteemed." The stools with the head at the lower end, usually represent some animal (e.g. Fig. 53, which is obviously

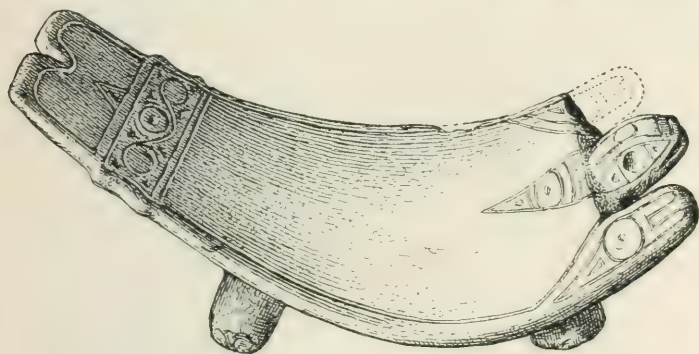


FIG. 53.—Stone seat; Porto Rico. *National Museum, Washington.*
Scale $\frac{1}{3}$.

a turtle or tortoise) or monster. Those with the head at the upper are generally anthropomorphic, and the back approximates more nearly to the perpendicular (Fig. 54). An interesting wooden stool from a cave at Isabela, near Porto Plata in Santo Domingo, is shown on Pl. XXII. This is of a rather unusual pattern and represents a man prone on the ground. The face has cheek-grooves, like the idol in Pl. XVIc, p. 182, and both the eyes, cheek-grooves and ear-lobes were probably inlaid in its original state. Other noticeable features are the large lip-plug and the ornamental bandages indicated below the knees.

As regards the dwellings of the Carib, the houses of

the inhabitants of St. Vincent, according to de Poincy, were usually built close together in villages, generally on an elevation, so as to gain air and for the sake of freedom from mosquitoes. They were oval in shape, with walls of interlaced reeds supported by a framework of posts. The roof was composed of leaves or canes, reaching nearly to the ground, there were partitions

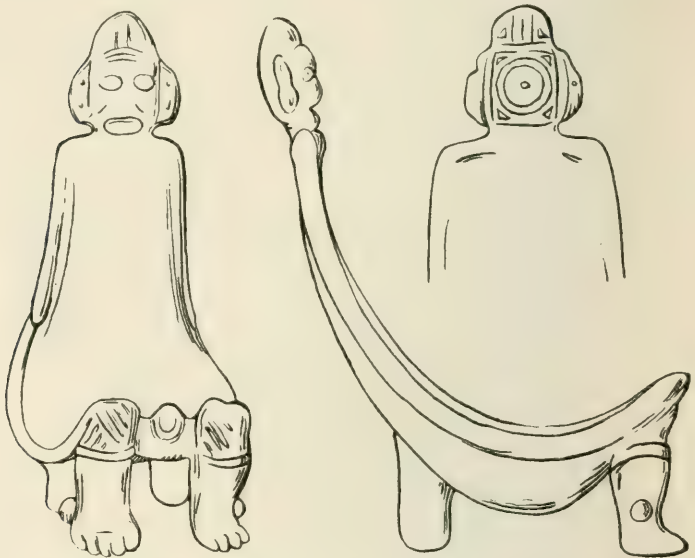


FIG. 54.—Wooden seat; Santo Domingo or Porto Rico. *After Fewkes.*

within the structure, and the doorways were screened by mats. The floors were of beaten earth, and the interiors were kept very clean, except in the case of the Carbet, or communal house. One of these Carbet, on Guadeloupe, is mentioned by Peter Martyr as a "great hall or palace, about the which their common houses are placed. To this they resort as often as they come together to play." Several early authors describe the buildings on this island as the best they had yet seen, and the most plentifully supplied with provisions; the

same author mentions "innumerable villages of 20 or 30 houses, set round about in order, making the street in compasse like a market-place"; while he describes the huts as "made round like belles or round pavilions; their frame is raised of exceeding high trees, set close together, standing aslope, and bending inward." These were supported on the interior side by short posts, from which hammocks were slung. At the entrance to one house were two wooden images like serpents, which were at first thought to be gods, though it was later discovered that they were "set there only for comeliness." Rectangular dwellings were also found in this island. In St. Vincent each family of consideration had a separate cooking-house as well as buildings for storage. Besides hammocks and leaf beds, the furniture consisted of little seats cut from solid red or yellow wood, "polished like marble," four-legged tables of woven palm-leaf, and various vessels of pottery or gourd.

The islanders were seamen of no mean capacity, especially the Carib, who in the course of their voyages had left very few of the islands unvisited. The Tainan were less enterprising, perhaps for the reasons that they had been living a more settled life for a longer period, and that the islands which they occupied were far larger and more fertile. The canoes differed considerably in size and make, but all were of the "dug-out" variety without keels. Some were quite small and would not accommodate more than one or two individuals, while others were large enough to take a crew of seventy or eighty paddlers or even more. Columbus speaks of the craft of Santo Domingo as "canoes of solid wood, narrow, and not unlike our double-banked boats in length and shape, but swifter"; while in Cuba a large canoe was discovered drawn up on land under a thatched shed, so as to protect it against the rain and sun. This canoe was made from a single trunk, yet was "as

large as a twelve-oared barge." In the construction of a canoe a tree was first selected and killed by fire kindled round its trunk. After being left to season, it was felled, also by fire, and then hollowed out by alternate charring and hacking with stone axes. It was then buried in moist sand, and the beam increased by inserting transverse bars of wood, so as to bend the sides outward as far as possible. The ends were closed by triangular boards, and the gunwales heightened by bulwarks of sticks and reeds fastened with fibres and pitched with gum. Canoes were ornamented with carved images and painted designs, and in some cases carried an awning at one end. Herrera describes the Porto Rican canoes as "boats made of one piece of timber, square at the ends like trays, deeper than the canoes, the sides raised with canes, daubed over with bitumen." The illustration, Fig. 52*c*, p. 220, represents a canoe of this type, and is taken from the work of Oviedo, who implies that it is a typical specimen of Antillean craft. The boats were for the most part propelled by means of paddles with a cross-piece at the end of the handle, as shown in this illustration, and the crew stood, sat or knelt to their work. The Lucayan canoes were similar, and so too were their paddles, to judge from the remark of Ferdinand Columbus that they were "like a baker's peel." Even if swamped, a canoe did not founder, but the natives would empty out the water by rocking it from side to side and by baling with calabashes, and then scramble in again.

In the Carib islands, the craft seem to have been similar in all essentials, with the exception that, according to Oviedo's statement, sails of cotton were sometimes employed. Voyages of 150 miles were of frequent occurrence, and even longer distances are mentioned. For instance, three Lucayans escaped in a small canoe from Santo Domingo and attempted to find their way home. Unfortunately they were recaptured when

almost in sight of their native island after having journeyed no less than two hundred miles. All the natives were very expert swimmers and divers, and could remain a long time under water ; we are told even that when a canoe was overturned near Guadeloupe, one of the occupants while swimming discharged several arrows from his bow at the Spaniards, with as much dexterity as if he had been on dry ground.

CHAPTER XI.—THE WEST INDIES. DRESS AND MANUFACTURES

LIKE many other primitive peoples, the Antilleans were not content with the bodily form given them by nature, but attempted to mould it in accordance with some preconceived idea of beauty. Their attentions were directed to altering the shape of the head, and the women applied pressure to the tender skulls of their children, both with their hands and by means of boards applied to the forehead and occiput. Edwards states that the Carib used two boards, one in front and one behind, while the Tainan employed but one, which was fixed so as to depress the forehead. Charlevoix however writes that two boards were used in Santo Domingo, and Oviedo implies the same of the Porto Ricans, while skulls exhibiting distinct antero-posterior deformation have been found in the Halberstadt cave in Jamaica. Flattened skulls are also reported from a cave near Cape Maysi in Cuba, as well as from caverns in the Bahamas, so the practice may be considered universal among the islanders. The Carib alleged, as reason for the flattening of the forehead, that individuals so treated were better able to shoot arrows over a tree while standing. In all the islands the ears and nose were pierced for the reception of ornaments, usually of gold, and in most places the lower lip also. The ornaments worn in the latter were occasionally of some size, to judge from the figure represented on Pl. XXII, p. 222. The use of paint, especially on ceremonial occasions, was equally widespread, and from Oviedo's statement it may be gathered that some form of tatu was practised at any rate in Santo Domingo.

When in full dress, both sexes painted themselves with designs in black, red, white and yellow. The black pigment was obtained from the sap of the *Xagua* tree, and lasted a fortnight or so before a fresh application was necessary. Red was obtained for the most part from the *Bixa orellana*, a low shrub, while the other colours were most probably ochreous earths. On the whole men made more use of this form of adornment than the women. The Lucayans also used pigments, and Ferdinand Columbus describes how the natives of Guanahani were painted black, white and red, some their whole body, others their faces, others again their eyes and nose only. Carib pigments appear to have been similar; before the application of the ornament a man would bathe and dry himself before a fire, and his wife would then paint him all over with red, sometimes adding black circles round his eyes. They claimed that the decoration served the further purpose of protecting them against rain, sun and insects.

As regards the dressing of the hair, there appears to have been some variety, but no very elaborate forms of *coiffure* were found. In many cases the hair was allowed to grow naturally, and worn loose and flowing; sometimes however the head was shaved, or the hair was arranged in long matted tufts. On the shores of the Samana Gulf, in Santo Domingo, according to Ferdinand Columbus, another fashion was observed, according to which the hair, which was allowed to grow to its natural length, was confined in bags ornamented with parrots' feathers. Among the Lucayans, in Guanahani, the hair was cut in a fringe above the eyebrows and ears, and confined by a string tied about the head. In some cases however it was allowed to grow naturally. Among the Carib of St. Vincent the hair was gathered behind in a tail; on the head the men wore a transverse parting, cutting a fringe over the eyes, while the women parted it longitudinally. For

cutting hair, certain sharp grasses were employed, and the men pulled out any hair which might appear on their faces. On Guadeloupe the hair was worn long and loose, while in Trinidad it was allowed to grow and parted in the middle. Columbus also mentions that the Carib in some cases clipped the hair short and painted their heads with devices. On the mainland, in Paria, the inhabitants appear to have followed the fashion first mentioned of St. Vincent, and we are told that the men pulled out their face-hair with pincers.

Clothing seems to have been of the most exiguous description, and in many cases entirely lacking. Among the Tainan for the most part the men and unmarried girls went nude, while the married women wore a covering consisting of a single leaf or a branch, or a cotton skirt. In the districts more advanced in culture there was a distinction between the skirts of women according to rank; the generality wore garments of this description reaching from waist to mid-thigh, while the skirts of women of importance fell to the ankle. Among the Lucayans also the men went nude, as well as all girls below the age of puberty. As soon, however, as marriageable age was attained, the occasion was celebrated by a feast, after which the girl assumed a small waist-net filled with leaves. After marriage this was replaced by a loin-covering of herbs or cotton. The Carib, both men and women, appear to have gone nude, though they wore certain tight bandages of cotton on the upper arms, below the knee and at the ankle. The legs of the women were swathed in cotton from the ankle to the knee, the ornament was called *coiro* and was "so hard girt that if it slips off that part is very thin." Similar ornaments were evidently worn in Jamaica; not only does Ferdinand Columbus, writing of Guadeloupe, speak of them as "the same (that) both men and women use in Jamaica, who swath their arms up at the armpits, that is about the smallest parts, like the old-fashioned

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GREATER ANTILLES

British Museum

1 & 3. STONE CEREMONIAL CELTS

2. STONE FIGURE

3. STONE AXE

(Scale: 1/4th)

sleeves used among us," but these bandages are clearly shown on the legs of the wooden figures illustrated on Pls. XVI, 3, and XXII, pp. 182 and 222. On the shore of the southern continent the clothing in many respects resembled that of the inhabitants of eastern Panama (see p. 120). In Paria the men wore waist-cloths of cotton, well woven and of different colours, while the women went nude. In Curiana they wore coverings of gold or small tortoise-shells, and in Cumana of gold ornamented with pearls (though these were soon replaced by small gourds after the coming of the Spaniards). In the latter locality, unmarried girls wore a simple cord round the waist, while the married women substituted for this a waist-cloth.

Various ornaments were worn on the head, round the neck, wrist and waist, and in the ears, nose and lips. These were made of feathers, stone, shell, gold, and, locally, of pearls, and were of very varied character. Feather ornaments have been mentioned on p. 194, but the diadems of Caciques were generally of gold, at any rate among the Tainan, and we are told that the Haitian chief Goacanagaric appeared wearing a gold "crown" which he placed on the head of Columbus. Besides the stone figurines, mentioned above (p. 193), beads were also constructed from this material, and were called *ciba*. Gold, usually in the form of plates, was worn in the ears and nose and round the neck. This metal was usually more or less alloyed with copper, and the ornaments made from it were known as *guanin*. Las Casas mentions a very elaborate belt given by Goacanagaric to Columbus, which he describes in the following terms: "A belt, which in place of a pouch, was furnished with a mask, with two great ears of hammered gold, nose and tongue also. This belt was of very minute jewel-work, like baroque pearls, made of fish-bones, white in colour intermingled with a few red. It was sewn with cotton thread in the manner of embroidery, with such skill

that the threadwork on the reverse side resembled fine needlework, though all in white, very pretty to look at, as if it had been woven on a frame, like chasuble-borders in Castille. And it was so stout and strong that I believe it could not be pierced, or only with difficulty, by an arquebus. It was four inches broad." Scillacio, also writing of Santo Domingo, mentions "a dozen belts, polished with admirable art, and some of them variegated with thin plates of gold interwoven in the cotton fabric with wonderful skill." Bernaldez gives a description of the dress and ornaments of a Jamaican Cacique and his wife and daughter, which will serve as an illustration of the equipment of a Tainan of high rank: "Around his head was a band of small stones of various colours, but principally green, symmetrically arranged, with large white stones at intervals, and connected in front by a large jewel of gold. Two plates of gold were suspended from his ears by rings of very small green stones. To a necklace of white beads, of a kind deemed precious by them, was suspended a large plate in the form of a *fleur-de-lys*, of guanin, an inferior species of gold: and a girdle of variegated stones, similar to those round his head. . . . His wife was adorned in a similar manner, having also a very small apron of cotton and bands of the same round her arms and legs. The daughters were without ornaments, excepting the eldest and handsomest, who had a girdle of small stones, from which was suspended a tablet, the size of an ivy-leaf, composed of various coloured stones on a net-work of cotton." The Carib frequently adorned their bodies with down, flower-petals and gold-dust, applying them to their body-paint before it was dry. They also wore necklets of stone, amber, coral and shell beads and amulets, the men wearing similar ornaments round their upper arms, the women round their wrists. Nose-ornaments consisted of fish-spines or plates of turtle-shell, and fish-spines or bone discs were

worn in the lips. But their most prized ornaments were crescents of copper or base gold, a small pattern being worn in the ears and a larger on the breast. These were *insignia* of rank, and as such were carried by leading men and their children, and were inherited from father to son. On the mainland, in Paria, ornaments were of much the same description; thus we hear of men wearing collars composed of plates of base gold "like a ruff." But pearls were also worn in some quantity, especially by the women.

Like the rest of the tribes with which this book deals, the inhabitants of the Antilles were unacquainted with tools of metal, and relied principally upon stone for the manufacture of their implements. No doubt the native craftsmen also employed instruments of bone, teeth and other such materials, but these, being more perishable, have not survived. Shell was used to a considerable extent, more particularly in those islands where there was no suitable stone, but the constant intercourse between island and island led to the importation of stone tools into such localities. Stone axe- or adze-blades are found in considerable numbers throughout the West Indies, and are for the most part well made. In all known cases the surface has been carefully finished by grinding, and flaked implements are not found. Flakes and cores, however, have been discovered in some localities, notably the middens of Jamaica, and it is possible that flakes were used for a variety of purposes, such as scraping the cassava. As far as the Greater Antilles are concerned, the celts for the most part approximate to a petaloid form, such as is shown in its greatest purity in Fig. 55*f*. From this typical pattern there are a number of variations, some of which are shown in the same figure. Narrow chisel-shaped types are not altogether uncommon, especially in Jamaica, and these are usually furnished with a double edge. The two chief characteristics of the

Tainan celts are a more or less high polish, and the absence of any sort of groove for hafting ; to these may be added a third, which is not however universal, viz. a pointed butt. The latter however does not occur in the chisel-shaped type, and in some cases a flattened butt is found in the petaloid type also (see Fig. 55*d*). Of the Greater Antilles, Jamaica has produced not only the largest number of stone implements (considering its size), but also the finest. The petaloid celts of Jamaica, both for symmetry and polish, are unsurpassed by those of any locality in the world, and, considering the fact that they are in most cases fashioned from a very hard variety of stone, the amount of patient labour involved in their preparation must have been enormous. Tainan celts are invariably furnished with a curved edge, but this edge is not always sharp. Some in fact are quite blunt (e.g. Fig. 55*e*), and implements of this class must have fulfilled the function of pounders rather than of axes proper. Most of them are symmetrical in cross-section, but specimens are found of which the section is plano-convex, or even concavo-convex ; these however are by no means so common as the rest. Some of the Jamaican celts are so diminutive, specimens existing no more than 2·7 cm. in length, that one is tempted to wonder how they could have been used. As far as stone implements are concerned, the Virgin Isles must be included in the Tainan area, since the celts there found resemble in type those of Jamaica, though they are neither so well finished nor so symmetrical.

A few axe-blades have been found in the Greater Antilles, on one side of which a human face or figure has been rudely carved in relief (see Pl. XXIII, 1 and 3); the use of these is not known, but in all probability they were intended for ceremonial purposes. In actual use stone axe-blades were fixed in wooden hafts, and Oviedo gives an illustration which shows clearly the manner of

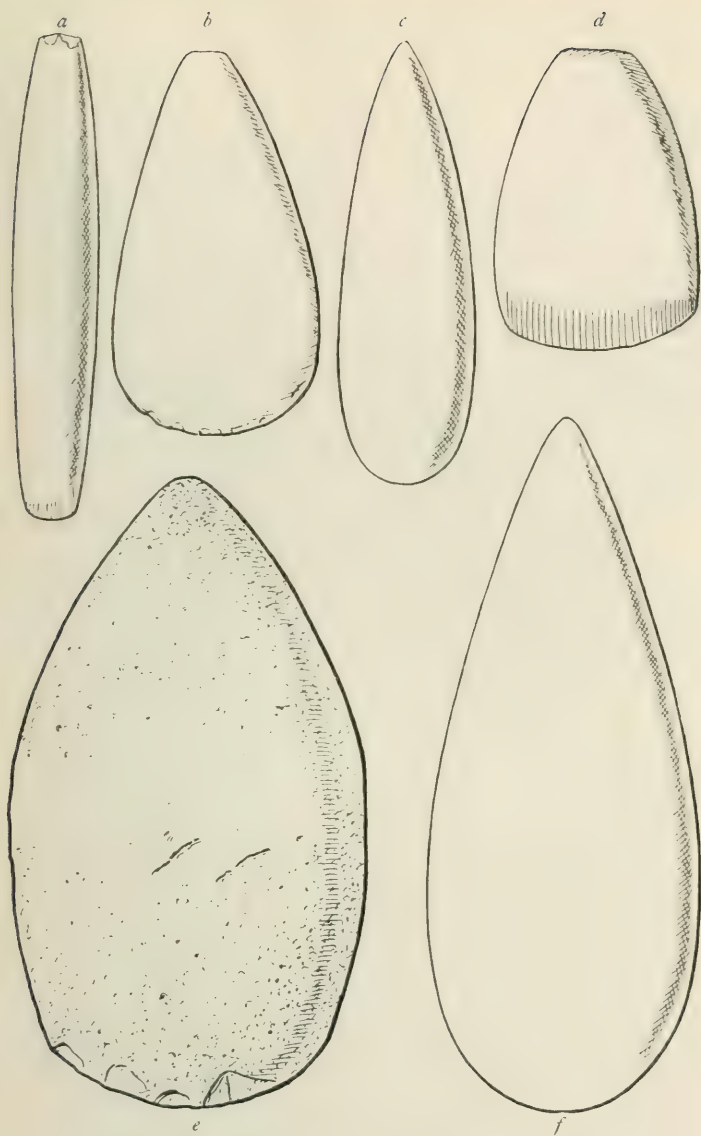


FIG. 55.—Stone celts ; Jamaica. *British Museum.* Scale $\frac{1}{2}$.

attachment. The haft was cut to the requisite length and then split at one end; the blade was inserted in the cleft, and a tight "serving" of cord above and below secured it in its position, and prevented the split from running further down the handle. A few very interesting examples representing hafted axes, but cut from solid stone, exist. One of the best is in the British Museum collection, and is figured on Pl. XXIII, 4. Here the method of hafting commonly employed in normal axes is clearly indicated, and the specimen affords a second excellent example of "translation" into stone form, of which the enigmatical stone collars may be regarded as the first (see p. 188).

The celts found on the Lesser Antilles exhibit a wider range of form. The petaloid type is not nearly so common, and many examples exhibit a flattened butt; there is a less definite curve to the edge in many cases, and some approximate to a triangular, or truncated triangular, outline. A certain number of fairly well-polished examples occur, but the most striking specimens have a dull matt surface, which is due less to want of care in workmanship than to the rather coarse grain of the rock from which they have been fashioned. This particular type is evidently of Carib origin, since it occurs only on those islands which had fallen into the power of this people, and is moreover especially common in St. Vincent. The implement is usually more or less paddle-shaped, resembling to some extent the *mere* of the New Zealander; the butt is sometimes bifurcated, often resembling the beaks of two birds ad-dorsed, and sometimes rounded, but there is almost invariably a definite constriction between it and the blade. In some cases this constriction takes the form of a more or less definite groove, the surface of which is rougher than that of the rest of the implement, and rather suggests that such examples were originally provided with a haft. A series of this class of imple-

Bureau d'Ethnologie



LESSER ANTILLES

STONE AXES: CARIB

1. TRINIDAD; 2. ST. VINCENT; 3. GRENADA; THE REST PROBABLY ST. VINCENT

(Scale: 1:50)

ment is illustrated on Pl. XXIV, in which most of these features are shown; for convenience of illustration the specimens portrayed are much of the same size, but dimensions vary greatly, and the British Museum collection includes examples varying from 295 mm. to 35 mm. in length. The thickness of the



FIG 56.—Stone axe-blade; St. Kitts.
British Museum. Scale $\frac{1}{2}$.

blades exhibits a similar variation, and one rather large specimen, of the type 5, is no more than 15 mm. in its thickest part. A certain proportion of the celts cut from rock susceptible of a higher polish also exhibit grooves, such as the specimen from Dominica shown in Fig. 57*a*, p. 239, while an interesting grooved club-head, very similar to those of the Indians of the North American plains, has been found in St. Vincent

(Fig. 57*c*). It is fair to infer that most of the Carib axes, with the exception of certain specimens which may have been simply carried in the hand, were hafted in a manner similar to those of the Tainan; but certain specimens occur, though in small numbers, which point to a different method. These are of the type shown in Fig. 56, p. 237, and are furnished with a slot on either side and a longitudinal groove down the butt. Blades of this type must have been fastened to the handle by lashings passing through the slots, while the groove permitted them to rest firmly against the handle. The example figured comes from the island of St. Kitts, but a similar specimen has been found also in Trinidad. The type is interesting as it connects the Lesser Antilles with the southern continent, celts of this pattern, though of smaller dimensions, having been found in some numbers in Guiana.

As mentioned above, celts of shell are found on some of the islands, but only occur in numbers on Barbados, where no stone suitable for the manufacture of axes occurs naturally. They are cut from clam-shell, practically in a fossilized state, and conform to two main types, which are illustrated in Fig. 57*d* and *e*. Such blades are plano-convex or concavo-convex in cross-section, and exhibit a definite bevel at the edge. A certain number of stone celts have also been discovered on this island, but they must have been carried thither from elsewhere. The shell blades have been discovered in different parts of the island, mostly lying on or near the surface of the ground. A large number was found in a cave, 350 feet above sea-level, and situated in a cliff two miles from the sea. Remains of shells, chiefly of the conch variety, were found associated with them, and they occurred in a surface layer of black loam, beneath which was a stratum of hard red earth in which no remains were discovered.

Stone pestles are found throughout the Antilles, with

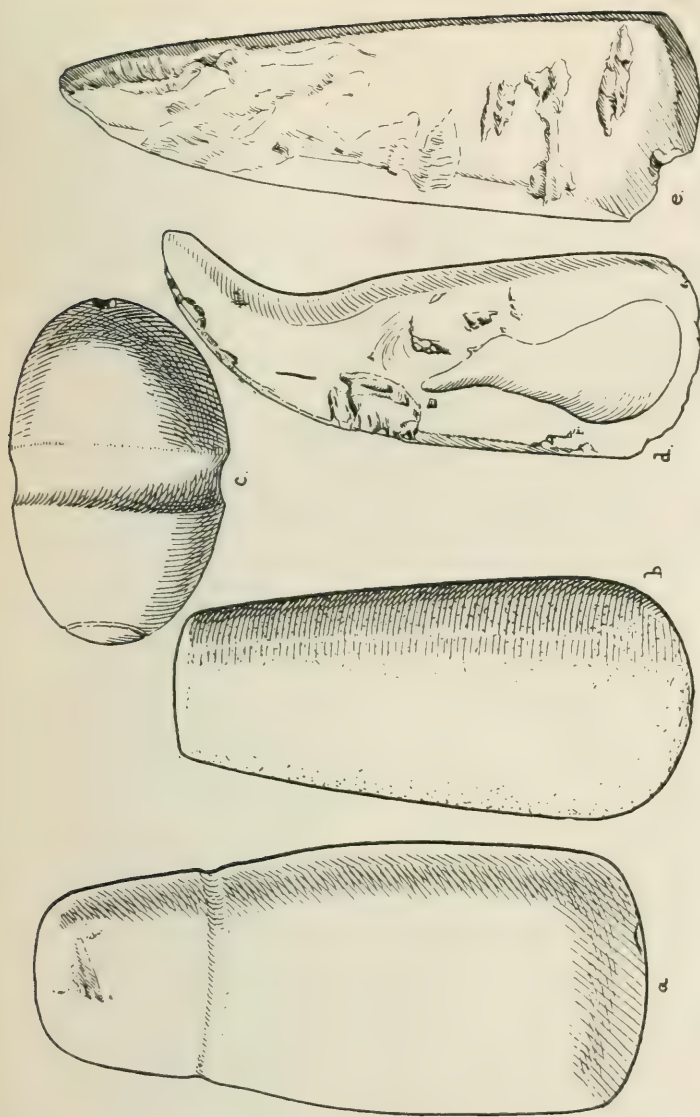


Fig. 57.—Stone and shell implements; *a*, Dominica (stone); *b*, Trinidad (stone); *c*, St. Vincent (stone); *d* and *e*, Barbados (shell). *British Museum. Scale 1/2.*

the difference that whereas those of the Lesser Antilles are mostly plain unornamented cones (examples known being from St. Kitts, Guadeloupe, St. Vincent and Trinidad), those from the Greater Antilles are ornamented with a human face or figure or a bird at the butt. Examples of Tainan pestles are shown on Pl. XX, p. 212, and the most elaborate specimens appear to come from Santo Domingo. In these, for descriptive purposes, Fewkes recognizes four parts, the head, the handle, the lens (or enlarged grinding surface) and the ferule (situated at the junction of the lens and handle). All these parts are represented in Pl. XX, 2, from Santo Domingo, in which the head is carved in the form of a crouching human figure. Pl. XX, 1, has no locality, but owing to the peculiar vertical grooves shown on the cheeks (of which the exact counterparts are shown on the wooden idol figured on Pl. XVI, 3, p. 182), it may be regarded as being almost certainly of Jamaican origin. In fact the specimens from the latter island and from Porto Rico seem to be distinguished from the examples from Santo Domingo by the fact that they have no well-developed "lens." A pestle of unusual form is figured on the same plate (Fig. 3), and there is reason to believe that the place of origin was either Santo Domingo or Porto Rico. These pestles have usually been thought to be pigment-grinders, but it is perhaps more likely that they were employed for pounding cassava and other vegetable forms of food. In the category of pestles may be included the two objects shown on Pl. XXV, 1 and 2, p. 242. Specimens of this type are usually known as "rubbing-stones," though their function can hardly differ essentially from that of the "pestles" proper. One represents a bird, and the other a recumbent female figure, and both show signs of wear on the under surface. Stone mortars occur in some numbers on the islands. These are rough oval bowl-shaped objects of stone, without ornamentation,

and were doubtless used in connection with the pestles. One or two isolated specimens of metates have been discovered, one of which, from Jamaica, is illustrated in Fig. 58. It is at least doubtful whether these may be regarded as belonging to the indigenous culture of pre-Spanish days, and it is more probable that they were introduced, at some period subsequent to the discovery, from Central America.

Of other objects in stone, the collars and the three-pointed stones have already been discussed (pp. 185 and

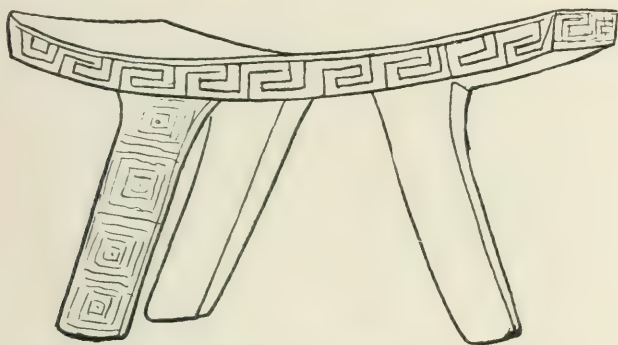


FIG. 58.—Stone *Metate*; found in Jamaica. *After Duerden.*

186), but mention may be made here of certain stone “masks,” which seem to be in some degree analogous to the latter. One of these is figured on Pl. XXV, 3 and 4, p. 242. Most of the masks, but not all, are furnished with projections above and below the face, grooved transversely, which seem to suggest that these objects, whatever their significance, were intended to be attached by lashings to something else, perhaps a pole. Idols were also carved from stone, though they are not very common, and a small specimen is shown on Pl. XXIII, 2. Figurines of still lesser dimensions, furnished with a perforation for a suspension cord, exist in greater numbers, and were probably worn as amulets

(see p. 193 and Fig. 51). Cylindrical beads, of chalcedony and other hard stones, occur on all the Greater Antilles, and all present the bi-conical form of perforation, proving that they have been drilled from both sides. A certain number of long tubular beads have been found, some of which are ornamented with a band in relief. The drilling of these must have presented considerable difficulties to the islanders, whose supply of adequate tools was exceedingly limited. However, the study of other peoples ignorant of metal implements has taught that surprising results can be achieved with instruments of stone and even wood, combined with the use of sand and water. The Antilleans were accustomed to cut fish-hooks from shell and turtle-shell by means of a henequen cord moistened and dipped in sand, and, at a later period, even succeeded in sawing through iron shackles by the same primitive method. But in any case the time involved in the preparation of beads, axe-blades, and especially such elaborate objects as the stone collars, must have been enormous. The labour spent upon them is quite sufficient to absolve the aborigines from the charge of laziness which many of the early writers bring against them, chiefly for the reason that they evinced a strong disinclination to spend their lives, apart from their women-kind, labouring in the gold-mines for the profit of the white men.

Wood is of course an easier material for the primitive artisan, but still most of the objects of this class which have survived are carved from a very hard variety, while a study of the forms will reveal with what facility the Tainan carver handled his material. The surface of the better preserved specimens, such as the idols on Pl. XVI, p. 182, is extremely well finished, and it must be remembered, moreover, that many of the details in the figures and stools were inlaid in shell and gold.

At the time of the discovery, the inhabitants of the Greater Antilles were possessed of a considerable

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1 & 2, *British Museum.* 3 & 4, *National Museum, Washington.*

GREATER ANTILLES

1 & 2. STONE RUBBERS

3 & 4. STONE HEAD

(Scale: 1/2)

quantity of gold, chiefly in the form of ornaments. This gold seems to have been collected principally on Santo Domingo and Porto Rico, but it had been carried by way of barter over most of the other islands. Thus the Lucayans of Guanahani informed Columbus that they obtained their precious metal from lands lying to the south, while the Cubans stated that it came to them from the east. In the two islands named, gold was gathered from deposits in the mountains and from the beds of streams. In many cases the collector simply scraped a hole a cubit's depth, and then, taking up a handful of sand from the bottom, picked out the grains and nuggets, which he placed in a calabash. In some places the metal was obtained by washing in wooden pans, but in either case the search for gold was hedged about with certain precautions of a religious nature, since, as on the mainland (see p. 100), the seeker was obliged to preserve strict continence for a period of twenty days before starting on his expedition, otherwise, so it was believed, his labours would be in vain. Strangely enough the Spaniards held a somewhat similar idea, to judge from the fact that Columbus ordered the miners to celebrate Mass before commencing operations. Gold was not smelted, but nuggets were beaten out between stones to form plates and other forms of ornament, and if the plate were to be moulded into the form of a mask it was set in a kind of "cement" specially prepared for the purpose. For the most part the gold exhibited various degrees of impurity, and was found to be alloyed freely both with copper and with silver. The alloy was of course natural and not intentional on the part of the natives. It is stated that the gold of Porto Rico was less pure than that of Santo Domingo, though a good deal was imported from the latter island into the former. Gold was used almost exclusively for ornaments, but a tradition existed on Santo Domingo that the island had once

been visited by certain "black men," who were armed with spears furnished with heads of metal. Some of these were given to Columbus, and, on analysis, were found to consist of gold alloyed with copper and silver. One of the stories regarding the "Amazons" reports that they were armed with metal cuirasses, but the statement is in the highest degree doubtful. The natives made no difficulty about parting with their gold to the Spaniards, but exchanged their ornaments freely for bells and trinkets of baser metal, and in fact the Spaniards seem in a few years to have swept the islands clean of every article of wrought gold. On one occasion their greed, which soon became notorious, defeated its own object, as the following story shows. At this period the Spaniards, having fixed themselves firmly in Santo Domingo, were preparing to extend their settlements to Cuba. Hatuey, the most powerful Cacique of the eastern end of the latter island, becoming aware of their intentions, called a meeting of the other chiefs and announced the fact. He went on to say that resistance was useless unless they were able to win the favour of the powerful Spanish god, but that he had discovered what that god, the mightiest of all gods, really was, and he suggested that they should perform propitiatory rites in its honour. He then produced a basket of gold, saying, "This is the god of the Spaniards," and the ceremony proceeded until all fell stupefied with the fumes of tobacco and maize-beer. Next day he again held an assembly and said that on second thoughts he did not feel confident that their safety was yet assured, since wherever the god was, thither the Spaniards were sure to come in search of it. He recommended therefore that all the gold should be collected and cast into the sea. This was done, but, unfortunately for the Cubans, it did not preserve them from falling under the Spanish yoke. The unlucky Hatuey himself fell into the hands of the conquerors,

and was condemned to be burnt. At the last moment, when fastened to the stake, one of the friars begged him to acknowledge Christianity before it was too late, so that his soul might be received into paradise. The Cacique asked if there were any Spaniards there, and, when the friar assured him that there were, but only good ones, replied that the best was bad, and he preferred to go elsewhere, from which resolution all the eloquence of the Franciscan was powerless to move him. The inhabitants of Paria on the mainland stated that they obtained their gold from their neighbours to the west.

Of the basket-work made by the islanders we know very little, save that it was of good quality. Baskets were used for a variety of purposes, most of which have been mentioned on the preceding pages, e.g. for straining the juice of the cassava, for storing and carrying food, for containing the skulls of the dead, and so forth. Some of the baskets were so finely woven that liquids could be carried in them; this pattern was double, one basket within another, the space between being lined with leaves. String and cordage for nets and other purposes were made from henequen fibre, obtained from the leaves of the plant, which were soaked for several days in a stream, weighted with stones. They were then stretched and dried in the sun, beaten with a stick, and the fibres were picked out, twisted into cord, and beaten again to render them pliant.

Cotton was spun and woven, and, as we have seen, much of the scanty clothing worn by the natives consisted of this material. Cotton thread and textiles were found in some quantities by the early visitors, and Ferdinand Columbus states that in one hut on Cuba over 12,000 lbs. weight of cotton was discovered. In Guadeloupe too a great deal of cotton was found in the native dwellings, together with "a new variety of loom" on which it was woven. The exact pattern of the latter is

unknown, but it was very likely similar to that used by the Mexicans and Maya.¹ Spinning, among the Carib, was performed by the women, who rolled the fibres together on the bare knee, but the actual weaving appears in some islands to have been the task of the men. A stone object resembling a spindle-whorl has however been found in one of the Greater Antilles. Well-woven cotton textiles were found on the mainland in Paria also. Some of the cotton cloths, both in the islands and on the southern continent, were ornamented with patterns in colour, but we are not informed whether they were painted, embroidered or inwoven. However the first process is the more probable, especially as pottery stamps, both flat (see Fig. 64 *a* and *b*, p. 253) and cylindrical, have been discovered on the islands. These stamps are similar in character to those which have been discovered in numbers in Mexico,² though of course the designs upon them are different. It is true that many of the Mexican stamps, especially those of the flat variety, were employed for imprinting designs upon the body, and it may be that some of the Antillean examples served a like purpose. A truer parallel would be the cylindrical wooden stamps employed in more modern times by some of the tribes of the Upper Amazon basin in the ornamentation of their textiles. It has been conjectured that the stamps were used for impressing designs upon pottery vases, but certainly none of the pots show any signs of having been decorated by such means.

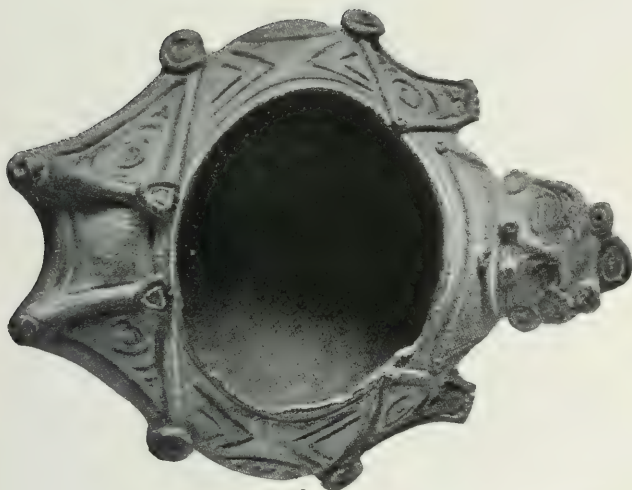
The Antilleans made a considerable amount of pottery, and fragments are common in the islands. The shapes include bowls, with rounded or, more rarely, flattened bases, plates and bottles, and the pots were freely ornamented with designs, incised, in relief and applied. The Tainan ware is rather coarse and friable,

¹ See *Mexican Archaeology*, pp. 148 and 307.

² See *Mexican Archaeology*, p. 150.



1



2

National Museum, U. S. Notes, II

GREATER ANTILLES
POTTERY BOWL; PORTO RICO
(Scale: 2/5ths)

the clay being freely mixed with pulverized or decomposing volcanic rock, or with sand. The walls of the vases are not very thin, and many of them show a dark line at the heart of a fracture, due to inadequate firing. The paste usually varies from grey or buff to terracotta, and though traces of paint are sometimes found on the outer surface, nothing like a coating of slip is found until we come to the Lesser Antilles. The pots usually appear to have been built up by adding bands of clay and then smoothing the surface. In Jamaica the



FIG. 59.—Pottery bowls; Jamaica. *After Duerden.*

most characteristic type perhaps is a boat-shaped round-bottomed bowl (Fig. 59*a*), the ends elongated to form handles, and sometimes decorated with incised patterns. These were used as receptacles for skulls when deposited in caves. Circular shallow bowls are often found, in some of which the edge turns inward at a distinct angle (Fig. 59*b*); the lip, both in this and the preceding type, is often strengthened by an additional band of clay. Incised designs, composed almost invariably of straight lines, are often found round the edges, as well as applied ornament, such as a zigzag, or a serrated band below. Occasionally an indented rim

occurs, and handles, often degenerating into mere knobs (see Fig. 60), are common. Such handles are almost invariably vertical, and a type characteristic of the island is nearly flush with the wall of the vase (Fig. 60*e*). In Jamaican pottery the most elaborate form of ornament is usually found upon the handles, which sometimes take the form of human or parrot heads, and the handles themselves, when not merely prolongations from the lip of the vase, have usually been moulded separately and luted on to the body. The pottery of

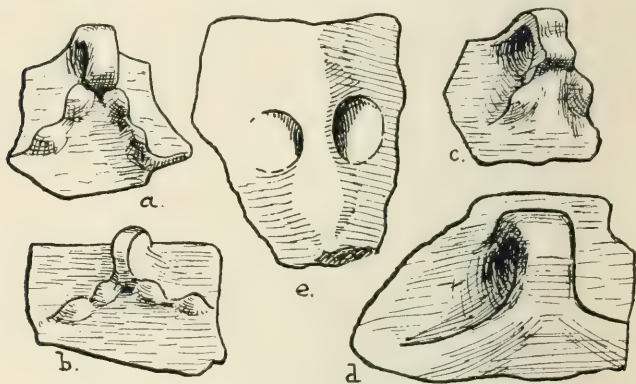


FIG. 60.—Pottery fragments; Jamaica. *After Duerden.*

Porto Rico and Santo Domingo has much in common, and it is practically impossible to distinguish between the two. Most of the vessels are in the form of depressed globular bowls, with simple rims which sometimes turn inwards at an angle. Plain, vertical “ribbon” handles occur, but usually the principal feature of the pot is its incised and applied decoration. The incised ornament is purely geometrical, and, besides series of straight lines, curves, circles and rarely spirals, are found. One of the principal characteristics of the incised ornamentation is the frequent presence at the end of a line, or very shortly separated from it, of a circular pit,

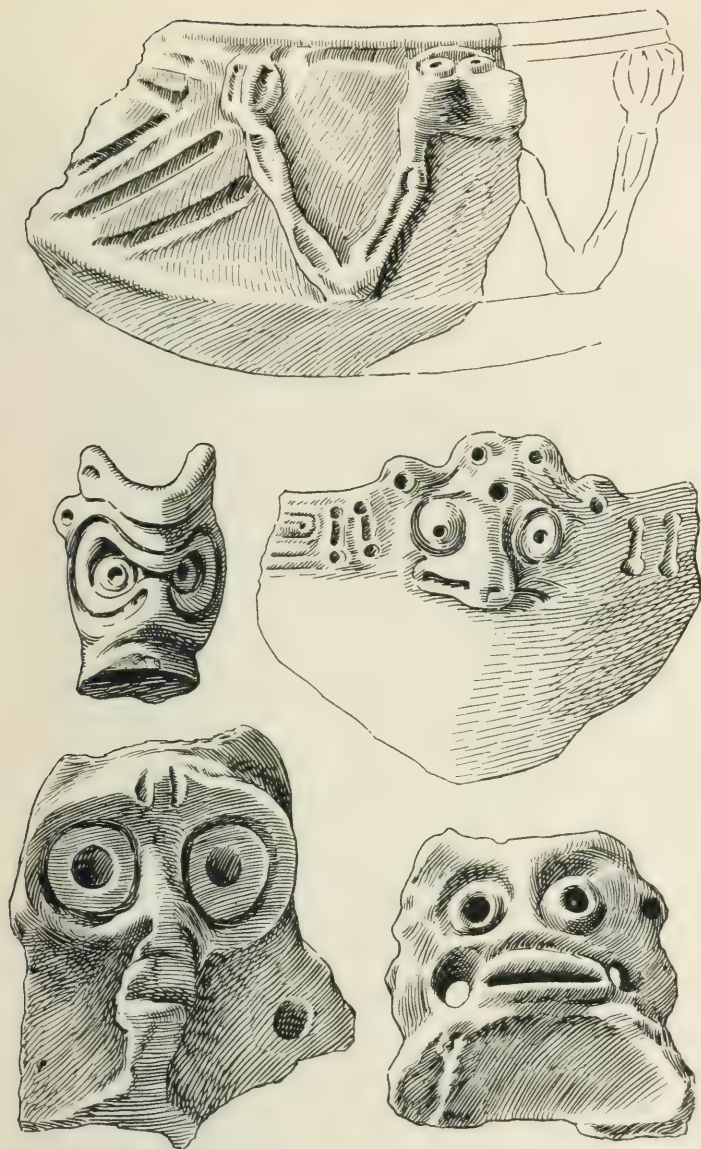


FIG. 61.—Pottery fragments; Santo Domingo. *British Museum.*
Scale $\frac{2}{3}$.

evidently made with the same tool (see Fig. 61*c*). These pits are also found on Cuban and Lucayan pottery, but neither on that from Jamaica nor on that from the Lesser Antilles. Relief decoration frequently accompanies the incised, and consists both of moulded and

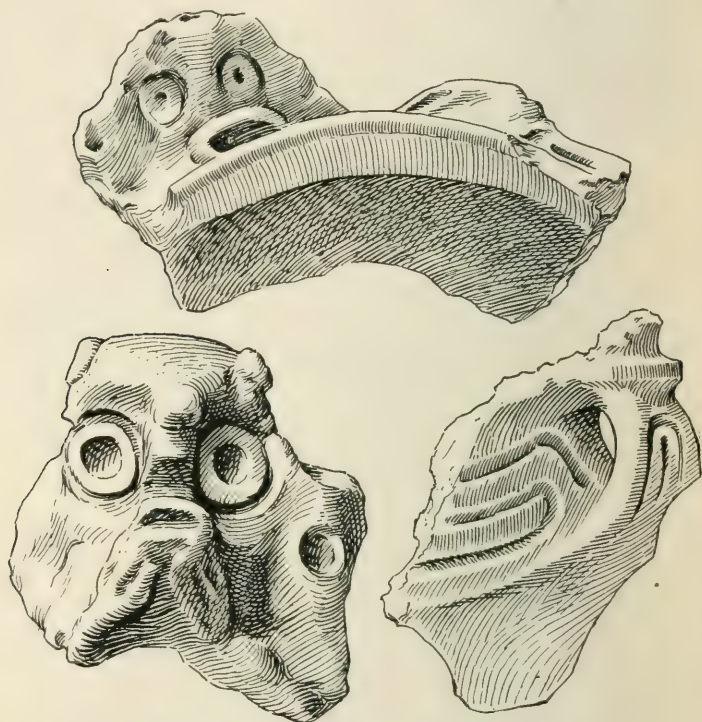


FIG. 62.—Pottery fragments; Santo Domingo. *British Museum.*
Scale $\frac{2}{3}$.

applied details in combination. Grotesque heads constitute the most common designs, and a variety is shown in Figs. 61 and 62. Such faces sometimes occur on the walls, and sometimes as ornamental projections, knobs or lugs, and occasionally bowls have been found representing a complete animal or grotesque human, the



GREATER ANTILLES

POTTERY BOWL.

(Scale: 1/3rd)

National Museum, Washington

various features of which are expressed both in incised and relief decoration. A couple of remarkably fine specimens, both from Porto Rico, are illustrated on Pls. XXVI and XXVII, pp. 246 and 250. Fragments of plates have been found, with a definite rim like that of a modern dinner-plate, and in this case the incised ornament is on the interior of the rim, but in other cases the decoration is confined to the exterior. A few bottles have been found in Santo Domingo, with relief details on the neck so that the latter resembles a human face ; these bottles are all flat-bottomed. A single bowl with a short vertical neck, paired vertical handles, below which are life-motives in relief, has been discovered in Santo Domingo. This specimen cannot however be considered as typical, and indeed it resembles rather one of the Costa Rican pots. It would seem probable that standing bowls, with a single circular foot, were also made in this island, since the feet themselves have been found, though no perfect specimen is known to exist.

The pottery of the Lesser Antilles is in many respects superior technically and artistically to that of the Greater. Slip decoration is not uncommon, the paste is often more homogeneous, footed vases occur with greater frequency, and the ornament, both incised and moulded, shows a superior finish. The pottery of Trinidad is especially good, and a few fragments, including an interesting bowl in the form of a frog, are shown in Fig. 63. The pots are often furnished with a definite rim, sometimes turned slightly towards the exterior, a feature which is also seen in the vases from St. Vincent and Grenada. Handles are found in great variety, all of the vertical pattern, as well as ornamental knobs, often moulded to represent animals' heads. In contradistinction to the pottery of the Greater Antilles, applied ornament is practically non-existent, and the spiral is a not infrequent feature of the incised

decoration. The use of the latter, to emphasize the eye, is well seen in Fig. 64*h*, from Carriacou, and in Fig. 64*i*, from Grenada. Moreover, to speak generally, the more or less human grotesques of the Tainan pottery are replaced by forms rather reptilian in character. Much of the Trinidad pottery is provided with a thin

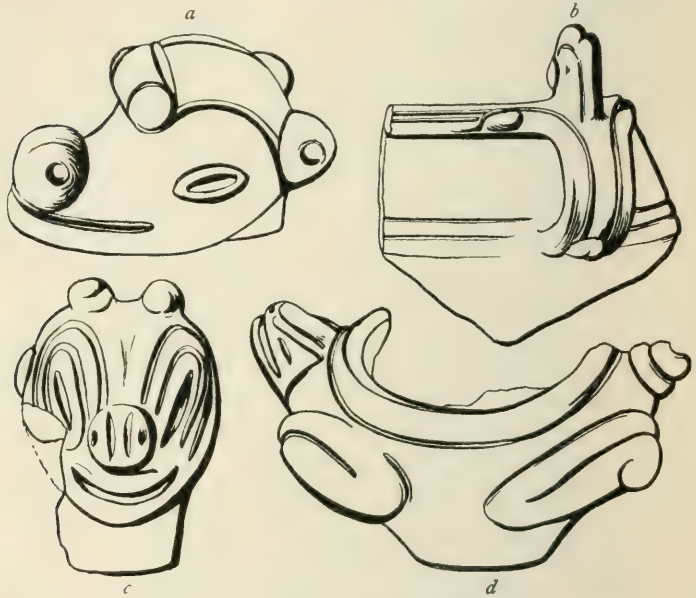


FIG. 63.—Pottery fragments ; Trinidad.

slip, white, purple-red or orange-red, the paste being generally greyish. White slip is not recorded elsewhere, though pottery has been found in St. Kitts, the incised decoration of which was filled with white pigment, the rest of the walls being red. On Grenada, red slip is found, and the fragment from Carriacou, shown in Fig. 64*h*, bears traces of an orange slip, though the paste is a greyish buff. The small head (Fig. 64*e*), a lug from a vase, furnished underneath with a depression into



FIG. 64.—Pottery fragments; *a-c*, Barbados; *d* and *f*, Morowhanna, British Guiana; *e*, *g* and *h*, Carriacou; *i*, Grenada. *British Museum*. Scale $\frac{1}{2}$.

which the finger may be inserted, also resembles Trinidad pottery in being moulded of greyish paste and covered with a red slip. Thus, though the pottery of the Lesser Antilles shows a certain family likeness to that of the Greater, it is distinguished from it by a number of features, all of which are exhibited by certain fragments discovered on the coast of British Guiana. For the purpose of comparison I have illustrated in Fig. 64*d* and *f* two fragments of a class of pottery found throughout the basins of the Aruka and Araau tributaries of the Barima River, not far from Morowhanna. The Aruka hills, isolated eminences, stand now in a tidal mangrove swamp, and were evidently at no very distant date actual islands. The two fragments are both moulded from a reddish paste and covered with a reddish-orange slip. Fig. 64*d* closely resembles Fig. 63*a*, from Trinidad, while in Fig. 64*f* is seen an incised spiral emphasizing the eye, just as in Figs. 64*i* and 64*h*, from Grenada and Carriacou respectively.

In Barbados has been discovered a very coarse class of ware, not very closely allied to any of that described above. The fragments include moulded human faces (Fig. 64*c*), of a character far more naturalistic than anything found in the rest of the islands. The pottery stamp, illustrated in Fig. 64*a* and *b*, also comes from this island.

A feature of Antillean archaeology is constituted by the petroglyphs which are found carved on the walls of caves, on boulders in river-valleys, and on other rocks and stones. A good deal has been written on the petroglyphs of Jamaica, Porto Rico, the Bahamas and the Lesser Antilles, but there is very little literature on this subject relating to Cuba and Santo Domingo. The nature of these carvings is well seen in the photographs reproduced on Pl. XXVIII, which illustrate two engraved rocks in St. Vincent, and which I owe to the kindness of the Rev. T. Huckerby, by whom they were taken, and



1

*Photographs by Rev. F. Hueberly*

2

LESSER ANTILLES
PETROGLYPHS; ST. VINCENT

of Mr. G. G. Heye, of whose museum they originally appeared in one of the publications. Unfortunately practically nothing can be said as to their significance, and there is not yet sufficient material placed on record to attempt a classification. In fact a great deal of archaeological investigation still remains to be carried out in the West Indies, and the numerous caves and shell-heaps will provide a rich hunting-ground to future investigators. Very little scientific excavation has been attempted, and that only at isolated sites. But the results have been good, and it is fair to prophesy that if the work were carried on in accordance with an organized plan, and the results carefully tabulated, it would be possible to write with comparative certainty concerning a number of highly interesting points which at present are veiled in obscurity.

Owing to the gaps in our knowledge it is impossible, for instance, to write, except in general terms, of Antillean art as a whole. The Tainan carvings, while they bear a certain resemblance to the products of South America, have nevertheless a distinct character of their own. In depicting human and animal forms, the primitive artist was able to express himself with considerable force, even though he was to a great extent fettered by convention. A tendency to the grotesque manifests itself, especially in the treatment of human features, but in the more important works of art the strength is still there, and the result is often sinister to an unusual degree. In decorative art, the designs are well suited to the space which they are intended to occupy, and, especially as far as curvilinear decoration is concerned, are distinguished by purity of line and restraint. Extremely characteristic of Antillean art in the ornamentation of a rectangular (or indeed any) space, is a central spot surrounded by a circle, the latter enclosed in one or more broken circles, and the corners filled with groups of three curved or

straight lines arranged more or less triangularly. The broken circle, it may be mentioned parenthetically, is a not uncommon feature of certain phases of the art of North America. The connection of the inhabitants of the Antilles, especially the Lesser Antilles, with the southern continent, is evident from many features of culture, most of which have appeared in the preceding pages. But it must be remembered that the islands extend to within a very short distance of Florida, and it is legitimate to ask whether it is possible to trace any influences emanating from North America. It can be said at once that if there were any such influences they were very slight, and cannot be discerned in the present defective condition of our knowledge. At the same time there is a certain amount of evidence to show that Antillean influences, especially in art, had affected Florida to some extent. Yet this evidence relates only to some of the pottery designs, and it would appear to have been exerted only a very short while before the discovery. There remains then Central America; and it is true that the western end of Cuba lies not very far from Yucatan. The archaeology of this island is very imperfectly known, but we know that the culture differed considerably in character in different regions. Yet nearly all the antiquities of which we have knowledge come from the eastern end, and it seems unlikely that, if there had been any intimate knowledge of the higher culture of the Yucatec, some evident trace should not have been left in the west. Still, much remains to be investigated in this quarter of the island, and it is at least in the highest degree probable that communication in some form had been established between Cuba and the mainland. For instance when Columbus first visited the island, he found in one of the huts a cake of beeswax, a material which, it would seem, was not collected by the Tainan themselves. Las Casas states that it must have come from Yucatan, and remarks: "I

too, in 1514, saw a similar cake in Cuba, and wondered whence it came, Yucatan and Mexico being as yet undiscovered." It may be added that the Yucatec preserved a tradition that certain of their ancestors had come from the east, and that when Grijalva was coasting along Tabasco he was able to make himself understood by the natives in the neighbourhood of the river named after him by means of interpreters from the islands. At the same time what has been said of Florida applies almost equally to Yucatan. Intercourse was probably limited to a few trading voyages, and had in all likelihood been established but a short time before the coming of the Spaniards. At any rate, in the present condition of our knowledge, there is no evidence that the far higher culture of the Maya had in any degree influenced the life of the Tainan.

APPENDIX

FOR the convenience of those who wish to study more intimately the many fascinating problems provided by the archaeology of Central America and the West Indies, I venture to append this bibliographical note. It does not in any way claim to be a complete bibliography, but it will serve to introduce the student to the principal works on the subject, and in many of these he will find references to others.

First as regards Nicaragua ; a few notes will be found in Torquemada's *Monarchia Indiana* (1723), but the most detailed and consecutive account of the Nicarao and Chorotega given by an early chronicler is that by Gonzalo Fernandez de Oviedo y Valdes, a French translation of which is given, under the title *Histoire de Nicaragua*, in Ternaux-Compans' *Collection de Documents*. This may be supplemented by Gomara's *Historia de las Indias* (1533), a general work on the Spanish possessions in America ; also by the *Descripcion de las Indias Occidentales* of Antonio de Herrera Tordesillas (1730), a work of similar character. As regards the linguistic problems relating to this region (as well as to Costa Rica and Panama), the most convenient work is that by Thomas and Swanton, to which reference has already been made on p. 29. This monograph contains a number of references to other authors, and should be read in conjunction with Lehmann's article, also quoted on the same page. E. G. Squier's *Nicaragua* deals in a general way with the archaeology of the country, with particular reference to the western region, while a monograph by J. F. Bransford, entitled

Archaeological Researches in Nicaragua, being No. 383 of the *Smithsonian Contributions to Knowledge* (1881), gives the result of excavations on the islands and shores of Lake Nicaragua. *Nicaraguan Antiquities*, by Carl Bovallius, published by the Swedish Society of Anthropology and Geography (1886), figures and describes a number of the monolithic statues found on islands in the lake, and F. Boyle's *Ancient Tombs of Nicaragua*, published in the *Archaeological Journal*, Vol. XXIII, p. 41, also contains much interesting information. For the eastern portion of Nicaragua, the Mosquito coast and the Rama country, the *Letters of Columbus*, published in translation by the Hakluyt Society (edited by R. H. Major 1847 and 1870) give a little information, as well as Ferdinand Columbus' life of his father, of which a translation is included in Churchill's *Collection of Voyages and Travels*, Vol. II, p. 501. An interesting account of the Mosquito is found in Vol. VI of the same work, p. 285, entitled *A Familiar Description of the Mosquito Kingdom*, written about the year 1699 by a traveller who signs himself M.W., and this is interesting to compare with Pim and Seemann's account contained in *Dottings in Panama*. For Nicoya the best archaeological treatise is certainly C. V. Hartman's *Archaeological Researches on the Pacific Coast of Costa Rica*, published as Memoir III of the Carnegie Museum, Pittsburgh (1907). A handy little book, as a compendium of the archaeology derived from literary sources, relating both to the Isthmus and the Antilles, is Beuchat's *Manuel d'Archéologie Americaine* (Paris, 1913).

For the archaeology of the Guetar in Costa Rica the best books to consult are those which contain the researches of C. V. Hartman, in particular the large volume, *Archaeological Researches in Costa Rica*, published in 1901 by the Royal Museum in Stockholm. Besides this monumental work, attention may be called

to two papers by the same author, *Some Features of Costa Rican Archaeology* (Report of the XVIth Congress of Americanists) and *The Alligator as a Plastic Decorative Motive in Costa Rican Pottery* (*American Anthropologist*, 1907, p. 307).

For Panama there are a number of works available. Besides the *Letters of Columbus*, in the editions mentioned above, we have the *Narrative of the Proceedings of Pedrarias Davila*, by Pascual de Andagoya (edited by Sir Clements Markham and published by the Hakluyt Society, 1865), and also the invaluable *Decades* of Peter Martyr Anglerius, the first of which was issued in 1511, and of which by far the most readable edition is that translated by Lok and published by Hakluyt in 1628. Another work of great value is the *Historia de las Indias*, by Las Casas, which may be found in Vol. LXII of Navarrete's *Coleccion de Documentos*, while Cieza de Leon's *Cronica del Peru* gives a certain amount of important information concerning the eastern tribes. Besides these the *History of the New World*, by Girolamo Benzoni (Hakluyt Society, 1857, edited by Rear-Admiral W. H. Smyth), is based on first-hand experience. With these should be studied an excellent treatise by W. M. Gabb, *Indian Tribes and Languages of Costa Rica* (*Proceedings of the American Philosophical Society*, Vol. XIV, p. 483), which deals at length with the customs and religion of the tribes around the Chiriqui Lagoon in more modern times. Of strictly archaeological works the most important are the following: W. H. Holmes, *Ancient Art of the Province of Chiriqui* (Report VI of the Bureau of American Ethnology), and *The Use of Gold and Other Metals Among the Ancient Inhabitants of Chiriqui* (published by the same institution in 1887); as well as G. G. MacCurdy, *A Study of Chiriquian Antiquities* (*Memoirs of the Connecticut Academy of Arts and Sciences*, Vol. III, 1911). On the subject of Chiriquian metal-work, the

paper by O. H. Evans, quoted on p. 126, should also be consulted.

As regards the Antilles, a number of the authors already cited give a great deal of valuable information, notably Columbus, Ferdinand Columbus, Peter Martyr, Las Casas, Herrera and Benzoni; while a useful epitome of the literary evidence is found in Beuchat. Of other works two perhaps take precedence; firstly Ramon Pane's account of the antiquities of the Indians, which was written at the command of Columbus and relates almost entirely to Santo Domingo. This is the best treatise we possess on the early religion of the Tainan, and the most easily procurable editions are an English translation in Vol. II, p. 567 of Churchill's *Voyages*, and a French version at the end of Brasseur de Bourbourg's edition of Landa's *Relation des Choses de Yucatan*. Secondly the *Historia General y Natural de las Indias* of Oviedo (1547). Nicolo Scillacio published in 1494 or 1495 an interesting account of the second voyage of Columbus, while another early work, based, it is true, mainly on the account of Oviedo, is the *Libro de las Costumbres*, by F. Thamara Cathedatico de Cadis (1556). To this may be added Juan de Laet, *Historia del Nuevo Mundo* (1610), and Juan Bautista Muñoz, a work of the same title (1793). An excellent compendium, chiefly of the ethnography and history of the Greater Antilles, is the *Histoire de l'Isle Espagnole* of F. Xavier de Charlevoix (1733), while a very useful compilation of the information relating to Santo Domingo was published by H. Ling Roth in the *Journal* of the Anthropological Institute, Vol. XVI, p. 247. Mention should also be made of Inigo Abbad y Lasierra, *Historia Geografica* (1866, based principally on the works of Las Casas and Oviedo), and Bachiller y Morales, *Cuba Primitiva* (1883). Of the more purely archaeological works the most important is J. W. Fewkes' *Aborigines of Porto Rico*

(25th *Annual Report* of the Bureau of American Ethnology, 1903-4), which contains much information gathered from literary sources, furnishes in footnotes an excellent bibliography, and is illustrated on the most liberal scale. This may be supplemented by the following papers by the same author: *Porto Rican Elbow-Stones in the Heye Museum* (*Contributions from the Heye Museum*, No. 4, and *American Anthropologist*, 1913, p. 435); *A Prehistoric Stone Collar from Porto Rico* (*American Anthropologist*, 1914, p. 319); and *The Prehistoric Culture of Cuba* (*American Anthropologist*, 1904, p. 585). Though the works of Fewkes give the most up-to-date account of the state of our knowledge of Tainan archaeology, they are to some extent based on a previous paper by Otis T. Mason, *The Latimer Collection of Antiquities from Porto Rico*, published as a *Report* of the Smithsonian Institution in 1876. For Jamaica, the student may consult J. E. Duerden, *Aboriginal Indian Remains in Jamaica* (*Journal of the Institute of Jamaica*, Vol. II, Part 4), and Th. de Booy, *Certain Kitchen-Middens in Jamaica* (*Contributions from the Heye Museum*, No. 3, and *American Anthropologist*, 1913, p. 425). For those who might be interested in an account of the Tainan antiquities preserved in the national museum I may mention a paper of my own, *Prehistoric Antiquities from the Antilles in the British Museum* (*Journal of the Royal Anthropological Institute*, Vol. XXXVII, p. 402).

As regards the Lesser Antilles, a very useful book was published in 1654, by Jean Baptiste du Tertre, entitled *Histoire Generale*. The *Histoire Morale des Isles Antilles*, by L. de Poincy, edited by H. Rochefort (2nd edition, 1665), is to some extent based upon this, and the latter work is followed in all essential points by John Davies in his *History of the Carriby Islands* (1666), a book which in other respects is rather misleading. Père de la Borde's *History of the Caribs*, of which a transla-

tion appeared in *Timehri* (British Guiana), Vol. V, p. 224, should also be studied. Other, more modern, treatises dealing with the antiquities of the Lesser Antilles, are, Otis T. Mason, the *Guesde Collection of Antiquities in Pointe-à-Pitre, Guadeloupe* (Report, Smithsonian Institution, for 1884), E. im Thurn, *Notes on West Indian Stone Implements, Timehri*, Vol. I, p. 257, Vol. III, p. 252, and Vol. III, p. 103, J. W. Fewkes, *Prehistoric Objects from a Shell Mound at Erin Bay, Trinidad* (*Contributions from the Heye Museum*, No. 7, and *American Anthropologist*, 1914, p. 200), and T. Huckerby, *Petroglyphs of St. Vincent* (*Contributions from the Heye Museum*, No. 6, and *American Anthropologist*, 1914, p. 238).

I wish to repeat that this list has no pretence to completeness, but it may serve a useful purpose as an indication of the sources whence I have drawn much of the information contained in this book, and, still better, prove a convenience to those who desire to pursue the study in greater detail.

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